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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

VOL. LII.

PART II. (NATURAL HISTORY, &C.)

(Nos. I. to II.—1883.)

EDITED BY

THE ACTING NATURAL HISTORY SECRETARY.

"It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science in different parts of *Asia* will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish, if such communications shall be long intermitted; and it will die away, if they shall entirely cease." SIR WM. JONES.

CALCUTTA:

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LIST OF CONTRIBUTORS.

Page

COCKBURN, J.;—*On the recent Existence of* Rhinoceros indicus *in the N. W. Provinces, and a Description of a Tracing of an archaic Rock-Painting from Mirzapur, representing the Hunting of this Animal,* (Plates VII & VIII), ... 56

DE NICEVILLE, L.;—*Description of a new Species of the Rhopalocerous Genus* Cyrestis *from the Great Nicobar,* (Plate I), ... 1

————————;—*On new and little-known* Rhopalocera *from the Indian Region,* (Plates I, IX, & X), ... 65

————————;—*Third List of Butterflies taken in Sikkim in October,* 1883, *with Notes on Habits, &c.,* 92

HILL, S. A.;—*On the Measurement of Solar Radiation by Means of the black-bulb Thermometer in vacuo. (Communicated by* H. F. BLANFORD, F. R. S.) 3

PEAL, S. E.;—*Notes of a Trip up the Dihing Basin to Dapha Pani, &c., January and February,* 1882, (Plates II to VI), ... 7

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PART I. (HISTORY, ANTIQUITIES, &C.)

(Nos. I. TO IV.—1883: with 23 Plates.)

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CONTENTS

OF

JOURNAL, ASIATIC SOCIETY OF BENGAL, VOL. LII, PART I, FOR 1883.

No. I.

	Page
Folklore from Eastern Gorakhpur (N. W. P.)—By HUGH FRASER, C. S.,	1
The Pagoda or Varáha of Southern India.—By Surgeon Major G. BIDIE, M. B., C. I. E., Superintendent Government Central Museum, Madras (with three Plates),	33
Coins Supplementary to Thomas' "Chronicles of the Pathán Kings of Delhi," No. III.—By CHAS. J. RODGERS, Principal Normal College, Amritsar, (with two Plates),	55
Relics from Ancient Persia, in Gold, Silver, and Copper.—By Major-Genl. A. CUNNINGHAM, C. S. I., C. I. E. (with two Plates),	64
Note on a Sanskrit Inscription from the Lalitpur District.—By RA'JENDRALA'LA MITRA, LL. D., C. I. E.,	67

No. II.

Folktales from the Upper Panjáb.—By the REV. C. SWYNNERTON, M. R. A. S., Chaplain of Naushera,	81
The Rupees of the Months of the Iláhí Years of Akbar.—By CH. J. RODGERS, Principal Normal College, Amritsar, (with two Plates),	97
Notes on the Remains of portions of Old Fort William discovered during the erection of the East India Railway Company's Offices.—By R. ROSKELL BAYNE, (with five Plates),	105
Essays on Bihári Declension and Conjugation.—By G. A. GRIERSON, B. C. S.,	119
Note on the preceding Essay.—By DR. A. F. RUDOLF HOERNLE,	159
On the Temples of Deoghar.—By DR. RA'JENDRALA'LA MITRA, (with one Plate),	164

Nos. III & IV.

Page

Memorandum on the superstitions connected with child birth, and precautions taken and rites performed on the occasion of the birth of a child among the Jáṭs of Hoshiyárpur in the Panjáb. —By Sirdar Gurdyal Singh, ... 205

A new find of Muhammadan Coins of Bengal (Independent Period). —By Dr. A. F. Rudolf Hoernle, (with two Plates), ... 211

On Stone Implements from the North Western Provinces of India. —By J. H. Rivett-Carnac, Esq., C. S., C. I. E., F. S. A., &c., (with three Plates), ... 221

Notes on the History of Orissa under the Mahomedan, Maratha, and English rule.—By John Beames, B. C. S., ... 231

Relics from Ancient Persia in Gold, Silver and Copper.—By Major General A. Cunningham, C. S. I., C. I. E., (with one Plate), 258

On Goṇikáputra and Gonardiya as Names of Patañjali.—By Ra'jendrala'la Mitra, LL. D., C. I. E., ... 261

The Town of Bulandshahr.—By F. S. Growse, C. I. E., (with two Plates), ... 270

LIST OF PLATES

IN

JOURNAL, ASIATIC SOCIETY OF BENGAL, Vol. LII, Part I,

for 1883.

Pl. I—III, (pp. 37). Pagoda or Varáha Coins of Southern India.
Pl. IV, V, (pp. 55). Coins Supplementary to Thomas' "Chronicles of the Pathan Kings."
Pl. VI, VII, (pp. 65, 66). Relics from Ancient Persia.
Pl. VIII, IX, (p. 103). Rupees of the Months of Akbar's Iláhí years.
Pl. X, (pp. 106, 114, 116, 117). Plan of the neighbourhood of the Old Fort William, shewing the Streets, etc., existing in 1847.
Pl. XI, (pp. 107, 114). Plan showing the portions of the walls of Old Fort William, uncovered in building the E. I. Railway Co.'s new offices.
Pl. XII, XIII, (pp. 107, 114). Remains of the Old Fort William, Calcutta.
Pl. XIV, (pp. 107). Rough Sketch showing N. E. Bastion of Old Fort William.
Pl. XV, (p. 177). Ground plan of the Temples at Vaidyanáth.
Pl. XVI, XVII, (pp. 217), Rupees of Mahmúd Sháh I and Bárbak Sháh of Bengal.
Pl. XVIII, XX, (pp. 224). Stone implements from the N. W. Provinces of India.
Pl. XXI, (pp. 258). Relics from Ancient Persia.
Pl. XXII, XXIII, (pp. 272, 274). Terra-cotta Antiquities from Bulandshahr.

LIST OF ERRATA.

page	23,	line	3	*for*	मार	*read* मारे
,,	24,	,,	3	,,	हा	,, हो
,,	24,	,,	23	,,	भेजल	,, भेजले
,,	24,	,,	27	,,	गोफ़ड़वा	,, गोफ़ँड़वा
,,	24,	,,	36	,,	खिण्वों	,, खिफ़्वों
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,,	25,	,,	38	,,	चिन्हेलों	,, चिन्हेलो
,,	26,	,,	26	,,	मोरे	,, मोरे
,,	26,	,,	35	,,	कर	,, करे
,,	28,	,,	17	,,	जोग	,, जोगे
,,	28,	,,	24	,,	दबु	,, देबु
,,	30,	,,	29	,,	घहिर	,, पहिरा
,,	31,	,,	1	,,	आचर	,, आँचर
,,	81,			,,	hazráh	,, huzrá
,,	82,			,,	Gangar	,, Gandgar
,,	83,			,,	Mársir	,, Máhsír
,,	89,			,,	bhangh	,, bángh
,,	124,	,,	1	,,	छुरिए	,, छुरिएँ
,,	124,	,,	20	,,	कथे	,, कथँ
,,	125,	,,	27	,,	भाखति	,, भाखथि
,,	126,	,,	28	,,	ए	,, एँ
,,	148,	,,	37	,,	जे	,, जँ
,,	150,	,,	32	,,	देखब, देखबै	,, देखब, देखबै
,,	153,	,,	30	,,	घोड़चऊ	,, घोडचऊ
,,	157,	,,	16	,,	लिख	,, लिख्
,,	158,	,,	14	,,	देखि	,, देखि
,,	160,	,,	1	,,	पाबै	,, पाबँ
,,	160,	,,	20	,,	भञ्जै	,, भञ्जँ
,,	161,	,,	7	,,	thee	,, those
,,	163,	,,	19	,,	सत्तमँ	,, सत्तमै
,,	163,	,,	23	,,	or ए	,, or एँ
,,	163,	,,	37	,,	151	,, 154
,,	211, 212,		*passim*	,,	Mahmúd	,, Maḥmúd
,,	219,	,,	25	transfer السلطان		to the end of the legend.

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Part I.—HISTORY, LITERATURE, &c.

No. II.—1883.

Folktales from the Upper Panjáb.—By the Rev. C. Swynnerton, M. R. A. S., *Chaplain of Nausherá.*

"In Winter's tedious nights, sit by the fire
With good old folks, and let them tell thee tales!"

The tales and stories which I propose to present to the notice of members have been literally gathered on winter's nights from the lips of the peasantry of the Upper Panjáb. So far as I am aware, not one of them has appeared in print; but in any case, whether some few of them have been published or not, there must still exist in the ensuing series a peculiarity of treatment and a freshness of incident, together with many other important points of difference, which will mark this collection as an original effort, interesting in itself, and interesting too for purposes of comparison. The story-tellers were partly Panjábís, and partly Páṭháns; some of them were tottering old men, and some of them youths, robust and strong. They are the tales which are the delight of the village Hazráh on winter's nights, when icy winds are blowing, and when the young men gather round the blazing fire to hear of the fantastic deeds of giants and fairies, and the adventures of animals and men, or when the village guest, if not too tired to sit up, alternates the recital of fictitious wonders by news from the great world, or commands the attention of auditors as simple as himself by circumstantial accounts of most disastrous chances, of moving accidents of his own, by flood and fell. It was at the little village of Gházi on the river Indus, thirty miles above Aṭak, that many of these stories were

told to the compiler, and translated to him *viva voce* from the Panjábi by his hospitable host and attached friend Thomas Lambert Barlow, Esq. There within sight and hearing of the majestic river of history and romance, in a district exclusively pastoral, close to the fabled mountain of Gangar, in the midst of many a ruined temple and fortress of an earlier race and a former faith, on ground historical and even classical though now so obscure and unknown, these interesting gleanings of old-world folklore were carefully gathered and stored. Exactly opposite lies a line of rocky hills overlooking the rushing waters of the river. On this spot stood an ancient city of fabulous strength and vast extent, the home of four Hindú brothers, all of them kings. Each of the low peaks of which there are several is crowned by a tower, a palace or a temple, while traces of connecting walls and ruined dwellings traverse the ground on all sides to the very edge of the cliff. This city according to tradition was so vast that one of its gates was close to Hund, an equally ancient site, which stands on the same bank about twenty miles to the south. What was the name of this once mighty capital? Possibly it may survive among the popular names of the peaks and ravines on which it was built, as Gálláh, Pihúr, Gharri dhá Lar, Parri dhá Kátthá, Gaddhi dhá Kátthá, Gangáriánh dhá Kassi, Bhoru dhá Kátthá. Hund has been identified as the spot where "Sikander Bádsháh" crossed over his conquering army of Greeks, and undoubtedly it possessed an important ferry from the very earliest ages.

A few miles to the north of Gházi where the hills begin to close in, we can almost see the collection of hamlets known as Torbela, the inhabitants of which are addicted to the curious vice of eating clay, as people in other parts are given to the consumption of opium. Opposite Torbelá stands the warlike independent village of Kabbal. It is here, between these two rival villages not more than twelve miles from Gházi, that the Indus breaks through the gorge of the restraining peaks on either side, the last spurs of the Himálayas, forming the territory, in part independent, but partly under our dominion, which the inhabitants call Yákistán. How beautiful is the view miles and miles up the river, with the descending lines of the precipitous mountains, one behind the other, receding ever more and more into blue haze, until crowned by the distant snows! As one sits in the warm winter sun, among the river boulders at Gházi, where the gold-washers are busy at work, and as one directs one's gaze northwards, past the bare tawny hills into the remote distance, one thinks how all this land was once in the hands of a dynasty of Greeks, of helmed Menander, or lightning-wielding Antialkidas, whose coins attest the excellency of the arts in these remote places when under their accomplished sway, but of whose influence every living trace seems to have disappeared, unless, in the classical designs of the village basketwork, or in the graceful devices in red and green on the

country nambdás of felt, one may be permitted to detect a remnant, however slight, of Grecian taste and western refinement. Passing on to a succeeding era, one remembers the local tradition of king Rásálu who, from those very heights to the left, hurled at his rival on the eastern bank a mighty defiance in the shape of a huge mass of greenstone weighing a maund and a half. Five kos it hurtled through the air, and it still reposes on the spot where it fell. Or, one longs for a holiday, however short, and for money and men, to penetrate beyond the tributary Sirin, famous for márṣír, and to visit the remoter hills of Thánnaul, the district of Nawáb Akram Khán, whose Summer House gleams from a distant peak, there, among much besides, to search for and to find the "*Haldí Dillí*," or great Rocking Stone, of which the people tell, and which though of towering size can be moved, say they, by a touch of a single finger.

However, it is time to address myself to the Folktales. I shall attempt in this issue little or no commentary, but I would leave each one of them to speak for itself, merely premising that the first series shall consist of a selected number of fables and short stories, and the next of longer and more ambitious stories having much resemblance in general character to the tales in the "Arabian Nights."

I. The Weaver and the Prophecy.

A village weaver went out to cut firewood. Climbing a tree he stood upon one of the branches, which he began to hew off close to the trunk. "My friend," said a traveller passing below, "you are standing on the very limb which you are cutting off. In a few minutes you and it will both fall to the ground." The weaver unconcernedly continued his task and soon both the branch and himself fell to the foot of the tree as the traveller had foretold. Limping after him the weaver cried, "Sir, you are God, you are God, Sir, you are God—what you prophesied has come to pass." "Tut, man, tut," answered the traveller, "I'm not God." "Nay, but you are," replied the weaver, "and now pray, O pray, tell me when I am to die?" To be rid of his importunity, the traveller answered, "You will die on the day on which your mouth bleeds," and he pursued his way.

Some days had elapsed when the weaver happened to be making some scarlet cloth, and as he had frequently to separate the threads with his mouth, a piece of the coloured fibre by chance stuck in one of his front teeth. Catching sight of this in a glass, and instantly concluding that it was blood, and that his last hour was at hand, he entered his hut, and said "Wife, wife, I'm sick; in a few moments I shall be dead: let me lie down, and go, dig my grave!" So he lay down on his bed, and turning his face to the wall, closed his eyes, and began deliberately to die. And indeed, such is the power of the imagination among these people, that he would have died with-

out doubt, if a customer had not called for his clothes. He seeing the man's condition and hearing of the prophecy, asked to examine his mouth. "Ah," said he, "what an idiot are you? Call you this blood?" and taking out the thread he held it before the weaver's eyes. The weaver, as a man reprieved from death, was overjoyed, and springing to his feet he resumed his work, having been rescued, as he imagined, from the very brink of the grave.

II. The three Weavers.

There were three weavers, all brothers, who lived in the same village. One day the eldest said to the others "I am going to buy a milch buffalo." So he went to a farmer, paid for the buffalo, and brought it home to his house.

The second brother was quite touched by the sight of it. He viewed its heads, its horns, and its teats, and then said "O brother, allow me to be a partner in this beautiful buffalo?" Said the elder, "I have paid for this beautiful buffalo twenty-two rupees. If you wish to be a partner in her, you had better go to the farmer, and pay him twenty-two rupees too, and then we shall have equal shares in her."

Shortly after the third brother came in and said, "O brother, you have allowed our brother to be a partner with you in this buffalo, won't you let me take a share too?" "Willingly," answered the other, "but first you must go to the farmer and pay him twenty-two rupees as we have done." So the third brother did so, while the farmer chuckled, saying, "This is a fine thing for me getting all this money for my skinny old buffalo!"

The three brothers now agreed that each one of them should have a day's milk from the buffalo in turn, and that each should bring his own pot. The two elder brothers had their turns, but when the third day came, the youngest said, "Alas! what shall I do? I have no pot in my house!" In this perplexity the eldest remarked, "This is a most difficult business, because you see if you milk the buffalo without a pot, the milk will be spilt. You had better milk her into your mouth." His ingenious solution of the problem was at once adopted, and the youngest brother milked the buffalo into his mouth. Going home he was met by his wife who asked, "Well, where is the milk?" Her husband answered, "I had no pot, so I had to milk the buffalo into my mouth." "O you did, did you," cried she, "and so your wife counts as no one? I am to have no milk? If I am not to have my share, in this house I refuse to remain." And she went off in anger to the house of her mother.

Then the three brothers went together to the headman of the village, and complained, begging him to order the woman to return to her husband. So the headman summoned her and said, "O woman, you may have your share of the milk too, just the same as your husband. Let him visit the

buffalo in the morning and drink the milk, and do you visit her in the evening." Said she, "But why could not my husband have said so? Now it is all right, and besides I shall be saved all the trouble of setting the milk for butter!"

III. The Weaver and the Water-melon.

Once upon a time a poor country weaver visited a town, where he saw a quantity of water-melons piled up one above the other in front of a baniá's shop. "Eggs of other birds there are," he said, "and I have seen them: but what bird's eggs are these eggs? These must be mare's eggs!" So he asked the baniá, "Are these eggs mare's eggs?" The baniá instantly cocked his ears, and perceiving that he was a simpleton answered, "Yes, these bird's eggs are mare's eggs." "What is the price?" "One hundred rupees apiece" said the baniá. The simple weaver took out his bag of money and counting out the price, bought one of the melons and carried it off. As he went along the road, he began to say to himself, "When I get home I will put this egg in a warm corner of my house, and by and bye a foal will be born, and when the foal is big enough, I shall mount it and ride it to the house of my father-in-law. Won't he be astonished?" As the day was unusually hot, he stopped at a pool of water to bathe.* But first of all he deposited the melon most carefully in the middle of a low bush, and then he proceeded to undress himself. His garments were not half laid aside, when out from the bush sprang a hare, and the weaver, snatching up part of his clothing while the rest hung about his legs in disorder, made desperate efforts to chase and overtake the hare, crying out, "Ah there goes the foal, wo, old boy, wo, wo!" But he ran in vain, for the hare easily escaped, and was soon out of sight.

The poor weaver reconciled himself to his loss as best he could, "Kismet!" cried he: "And as for the egg, it is of course of no use now and not worth returning for, since the foal has left it." So he made his way home and said to his wife, "O wife, I have had a great loss this day!" "Why," said she, "what have you done?" "I paid one hundred rupees for a mare's egg, but while I stopped on the road to bathe, the foal jumped out and ran away." His wife replied, "Ah, what a pity! if you had only brought the foal here, I would have got on his back and ridden him to my father's house!" Hearing this, the weaver fell into a rage, and pulling a stick out of his loom began to belabour his wife, crying, "What, you would break the back of a young foal? Ah you slut, let me break yours!"

After this he went out, and began to lament his loss to his friends and neighbours, warning them all, "If any of you should see a stray foal, don't forget to let me know." To the village herdsmen especially he

* Literally: On his way home he tarried *ut alvum exoneraret.*

related his wonderful story, how the foal came out of the egg, and ran away, and would perhaps be found grazing on the common lands somewhere. One or two of the farmers, however, to whom the tale was repeated said, "What is this nonsense? Mares never have eggs. Where did you put this egg of yours?" "I put my egg in a bush," said the weaver, "near the tank on the way to the town." The farmers said, "Come and show us!" "All right," assented the weaver, "come along." When they arrived at the spot the melon was found untouched in the middle of the bush. "Here it is," cried the weaver, "here's my mare's egg. This is the thing out of which my foal jumped." The farmers turned the melon over and over, and said, "But what part of this egg did the foal jump out of?" So the weaver took the melon and began to examine it. "Out of this," cried one of the farmers, snatching back the melon, "no foal ever jumped. You are a simpleton and you have been cheated. We'll show you what the foals are." So he smashed the melon on a stone, and giving the seeds to the weaver, said, "Here are foals enough for you," while the farmers themselves amid much laughter sat down and ate up the fruit.

IV. The Weaver-girl.

A certain quarter of a village was inhabited only by weavers. One day a fine young weaver-girl was sweeping out the house, and as she swept, she said to herself, "My father and mother and all my relations belong to this village. It would be a good thing if I married in this village and settled here too, so that we should always be together." "But," continued she, "if I did marry here, and had a son, and if my son were to die, oh how my aunts and my friends would come, and how they would all bewail him!" Thinking of this she laid her broom against the wall and began to cry. In came her aunts and her friends, and seeing her in such distress, they all began to cry too. Then came her father and her uncles and her brothers, and they also began to cry most bitterly, but not one of them had the wit to say, "What is the matter? For whom is this wailing?" At last, when the noise and the weeping had continued for some time, a neighbour said, "What bad news have you had? Who is dead here?" One of the uncles answered, "I don't know; these women know; ask one of them!" At this point, the headman arrived at the spot, and cried, "Stop, stop this hubbub, good people, and let us find out what is the matter." Addressing himself to an old woman, he said, "What is all this disturbance in the village for?" "I don't know," answered she, "when I came here, I found this weaver-girl crying about something." Then the weaver-girl on being questioned, said, "I was weeping because I could not help thinking that if I married in this village and had a son, and if my son were to die, all my aunts would come round me and bewail him. The thought of this made

me cry." On hearing this, the headman and his followers began to laugh, and the crowd dispersed.

V. The two Weavers and the Grasshoppers.

Two weavers took guns and went out for a day's sport. As they passed through the fields, one of them espied an immense grasshopper sitting on a mádár plant, which as they approached flew on to the shoulder of his companion. "See, see, there he is!" cried he, and levelling his piece, he shot his friend through the heart.

VI. The old Weaver and the Camel's footprints.

One night a camel trespassing in a weaver's field, left there the marks of his feet. In the morning the owner brought to the spot the oldest weaver in the village, expecting that he would be able to explain what manner of animal had trodden down his corn. The old man on seeing the footprints both laughed and cried. Said the people "O father, you both laugh and cry. What does this mean?" "I cry," said he, "because I think to myself, 'What will these poor children do for some one to explain these things to them when I am dead,' and I laugh, because, as for these foot-prints, I know not what they are!"

VII. Greeba the Weaver.

At the village of Bhurran lived an old weaver named Greeba who for a wonder was shrewd enough. It happened that Habbíb Khán the lambardár laid a tax on the weavers' houses at the rate of two rupees for every doorway. When Greeba heard of this, he tore down his door and laying it on his shoulders carried it off to the Khán's. "Here, Khán," said he with a profound salaam, "I have heard you want doorways, so I have brought you mine. I also hear you want the sidewalls, and I am now going to fetch them too." Hearing this, the Khán laughed and said, "O Greeba the weaver, take back your door, your tax is paid."

VIII. The Black Bee and the Black Beetle.

A villager once reared a black bee and a black beetle together, imagining them to be brothers. In looks they were not unlike, and the "boom" which they uttered seemed precisely the same. One day he set them flying. The bee lighted on a rose, while the beetle settled on a dunghill. "Ah," said the village seer, "these creatures are like ourselves, and it is only by observation that we can say who is worthy of friendship and who is not."

IX. The Gardiner's Wife, the Potter's Wife, and the Camel.

A gardener's wife and a potter's wife once hired a camel to carry their goods to market. One side of the beast was well laden with vegetables,

and the other with pottery. As they went along the road, the camel kept stretching back his long neck to pilfer the vegetables. Upon observing this, the potter's wife began laughing, and jested her friend on her ill-luck. "Sister," said she, "at the end of the journey there will not be a single vegetable left—you'll have nothing whatever to sell!" "It is true you are luckier than I am," answered the gardener's wife, "but remember the first to win are the last to lose!" When they arrived at the market place, the camel man ordered his animal to kneel down, but the weight on one side was so much greater, by this time, than the weight on the other, that the camel gave a lurch as he got on his foreknees, and crushed the pottery between himself and the earth, so that most of it was smashed, and what was not smashed was cracked. So it ended that the gardener's wife had something at least to sell, but the potter's wife had nothing.

X. The Mule and the Traveller.

A certain mule, having a great opinion of himself, began braying pretentiously, so that every one stopped to say "Who is that?" A traveller passing by at that moment said to him, "O Sir, pray tell me what was the name of your mother?" "My mother's name was Mare" answered the mule proudly. "And what was your father's name?" continued the traveller. "Be off," said the mule, "be off! None of your jesting with *me*. You are impertinent!"

XI. The Tiger and the Cat.

Tigers at first were ignorant, until the king of the tigers once came to the cat and begged him for lessons. The cat consenting taught the tiger to watch, to crouch, to spring, and all the other accomplishments so familiar to the race. At last when he thought he had learnt everything the cat had to impart, the tiger made a spring at his teacher intending to tear him and eat him. Instantly the cat ran nimbly up a tree whither the tiger was unable to follow. "Come down," cried the tiger, "come down instantly!" "No, no," replied the cat. "How fortunate for me that I did not teach you more! Otherwise you would have been able to pursue me even here."

XII. The Dog and the Cock.

Once upon a time a dog and a cock were sworn friends. But a famine fell on the land and the dog said to the cock, "There is no food for me here, so I am going away to another country. I tell you this that you may not blame me, and say, 'This dog was my friend, but he left me without a word!'" The cock answered, "O dog, we are both friends. If you go, I go. Let us go together, and as you are a dog you can forage for us both, since if I expose myself the village dogs will set on me and eat me

up." "Agreed," said the dog, "when I go for food, you shall hide in the jungle, and whatever I find I will fetch to you, and we'll share and share alike." So the two friends set out. After a time they began to approach a village, and the dog said, "Now I am going forward for food, but do you remain here. Only, first of all, if anything should happen to you when I am away, how shall I know it?" Said the cock, "Whenever you hear me crow several times, then hasten back to me." So for some time they lived happily, the dog bringing in supplies every day, while at night he slept beneath the tree on which the cock sat safely at roost.

One day in the absence of the dog, a jackal came to the tree and looking up, said, "O uncle, why, pray, are you perched so high? Come down and let us say our prayers together!" "Most willingly," answered the cock, "but first let me cry the bhangh* for all good Musalmans to come and join us." So the cock crew most lustily three or four times, until the dog in the village heard him, and said, "Ah something is about to happen to my friend—I must get back." He at once started for the jungle, but the jackal, when he perceived his approach, began to sneak off. Then cried the cock, "O good nephew, don't go away, stop at any rate for prayers. See, here's a pious neighbour coming to join us!" "Alas, friend, I would stop with pleasure," replied the jackal, "but it just occurs to my mind that I quite forgot to perform my ablutions.† Farewell!" And quickening his pace, he disappeared.

XIII. The Silversmith and his Mother's Bangle.

Silversmiths as a class bear a bad reputation for mixing up an undue quantity of alloy in the silver of their customers. There was once a silversmith who in a moment of disinterestedness promised his mother that he would give her a bangle which should contain nothing but pure silver. "You are my mother," said he, "and I as your son who owe you so much cannot do less." So he cast a bangle for his mother out of unmixed silver, and when it was finished, he stored it up for her and went to bed. But he was quite unable to get a wink of sleep. He turned from side to side, and moaned and fretted in torment, frequently exclaiming, "Ah that wretched bangle! What a simpleton was I to make a bangle without alloy!" At last he could stand it no longer, so he got up, lighted his lamp, and did not rest until, having melted down the silver once more, he had recast it with a considerable admixture of base metal. Then with a conscience purged of offence he returned to his deserted couch, and in an instant he

* The Musalman cry to prayers is called the BHANGH. So also is the crow of a cock.

† Literally, "Proh dolor, amice, pepedi: domum redire me decet ut ablutiones meas perficiam. Vale!"—a satirical reference to the frivolous regard which the stricter Muhammadans pay to the punctilios of ceremonial washings.

was asleep, while a fat smile of pleasure and contentment betokened the satisfaction of his mind.

XIV. The Jackal and the Voice of fame.

A jackal prowling round a village one evening was spied by some of the village dogs which instantly gave the alarm. At the same time some wayfarers began to point at him and cry, "See, there he goes, there he goes!" "This always strikes me as a most remarkable thing," said the jackal as he cleared off, "I haven't a single acquaintance out of my own set in the world, and yet wherever I go, everyone seems to know me! How inconvenient is fame!"

XV. The Four Associates.

Once upon a time a crow, a jackal, a hyena, and a camel swore a friendship, and agreed to seek their food in common. Said the camel to the crow, "Friend, you can fly. Go forth and reconnoitre the country for us." So the crow flew away from tree to tree, until he came to a fine field of mashmelons, and then he returned and reported the fact to his companions. "You," said he to the camel, "can eat the leaves, but the fruit must be the share of the jackal, the hyena, and myself." When it was night all four visited the field, and began to make a hearty supper. Suddenly the owner woke up and rushed to the rescue. The crow, the jackal and the hyena easily escaped, but the camel was caught and driven out with cruel blows. Overtaking his comrades, he said, "Pretty partners you are, to leave your friend in the lurch!" Said the jackal, "We were surprised, but cheer up, to-night we'll stand by you, and won't allow you to be thrashed again."

The next day the owner as a precaution covered his field with nets and nooses.

At midnight, the four friends returned again, and began devouring as before. The crow, the jackal and the hyena soon had eaten their fill, but not so the camel, who had hardly satisfied the cravings of hunger, when the jackal suddenly remarked, "Camel, I feel a strong inclination to bark." "For Heaven's sake don't," said the camel, "You'll bring up the owner, and then while you all escape, I shall be thrashed again." "Bark I must," replied the jackal who set up a dismal yell. Out from his hut ran the owner, but it happened that while the camel, the crow and the jackal succeeded in getting away, the stupid hyena was caught in a net. "Friends, friends" cried he "are you going to abandon me? I shall be killed." "Obey my directions" said the crow, "and all will be right." "What shall I do?" asked the hyena. "Lie down and pretend to be dead," said the crow, "and the owner will merely throw you out, after which you can

run away." He had hardly spoken when the owner came to the spot, and seeing what he believed to be a dead hyena, he seized him by the hind legs and threw him out of the field, when at once the delighted hyena sprang to his feet and trotted away. "Ah," said the man, "this rascal was not dead after all!"

When the four associates met again, the camel said to the jackal, "Your barking, friend, might have got me another beating. Never mind, all's well that ends well; to-day yours, to-morrow mine."

Some time afterwards the camel said, "Jackal, I'm going out for a walk. If you will get on my back, I'll give you a ride, and you can see the world." The jackal agreed, and stooping down the camel allowed him to mount on his back. As they were going along, they came to a village, whereupon all the dogs rushed out and began barking furiously at the jackal whom they eyed on the camel's back. Then said the camel to the jackal, "Jackal, I feel a strong inclination to roll." "For Heaven's sake, don't," pleaded the jackal, "I shall be worried." "Roll I must," replied the camel, and he rolled, while the village dogs fell on the jackal before he could escape, and tore him to pieces. Then the camel returned and reported the traitor's death to his friends, who mightily approved the deed.

XVI. The Jackal and the Ewe sheep.

Once upon a time a certain jackal made a dash at a ewe-sheep hoping to catch her. The sheep rushed into a half-dry tank where she stuck in the mud. The jackal attempting to follow her stuck in the mud too. Then said the jackal, "O aunt, this is a bad business!" "O nephew," answered she, "it is by no means so bad as it will be soon, when my master appears. On his shoulder he will have a sángal (forked-stick), and behind him will follow his two dogs Dabbú and Bholú. One blow with his stick will hit you in two places, and his dogs will drag you out by the legs. Then, dear nephew, you will know this business is not so bad now as it will be then!"

XVII. The Páthán and the Plums.*

There is a certain small black plum grown in the Hazárá District, called the Ámlok, which, when dried, looks like a species of black beetle. One day a Páthán stopped in a bazaar and bought some of them, laying them in a corner of his lunghí. As he went along he took out a handful in which there chanced to be one of these beetles alive, and the little creature feeling the pressure of the man's hand began buzzing and squealing. But the Páthán determined to be deprived of no portion of his money's worth, said "Friend, you may buzz, or, friend, you may squeal, but in the measure

* This tale and "The Páthán and the Ass" ridicule two of the principal characteristics of the Páthánsaccording to popular estimation.

you came, and in the measure you'll go." Saying which he clapt the whole handful, plums and beetle together, into his mouth and devoured them.

XVIII. The Páthán and the Ass.

A Páthán was one day sitting in a ferry-boat which was moored to the bank of the Indus. His talwár or sword lay by his side. Presently down came a countryman driving a donkey and requesting to be ferried across the river. The donkey, however, having come to the boat refused to enter, utterly regardless of entreaties, threats and blows. Suddenly the Páthán sprang from his seat, seized his tulwar, and at a blow smote off the donkey's head. "To a Páthán," cried he, "this stubborn pride is permissible; but to an ass—never!"

The people of Baner, though noted for their bravery, are considered by their neighbours as the most stupid of mankind, not even excepting weavers. This fact is illustrated by the following anecdotes:

XIX. The Baner Man and the Mill.

A Banerí came down to the Indus where he saw a water-mill at work. Said he to himself, "People say that God is known by His wonderful ways. Now here is a wonderful thing with wonderful ways though it has neither hands nor feet. It must be God." So he went forward and kissed the walls, but he merely cut his face with the sharp stones.

XX. One Banerí asked another,

"If the Indus were set on fire where would the fishes go?" "They would get on the trees" said the other. Then said the first, "Are fishes like buffaloes to climb up trees?"*

XXI. The Widow of Baner.

There was a widow of Baner who had two sons. They had cut the harvest of their little ancestral field, and their two bullocks were treading out the grain, when suddenly the sky became overcast, and a storm of rain swept by. The poor silly woman instantly caught a certain familiar insect, a friend to man, and, running a needle and thread through it, hung it up to a neighbouring ber tree, as a charm to drive away the unwelcome shower. At the same time she addressed God in the following words: "O God, my boys are but children, and in this thing are innocent. But thou art a white-bearded man. Didst thou not see that this rain was not wanted for thrashing out my wheat?"

XXII. The Baner man and the boat.

A countryman who had spent the whole of his life in the fastnesses

* This tale was not a mere invention of the story-teller. It is frequently told in ridicule of the dense stupidity of the Banerís.

of Baner and had never seen the Indus determined to perform a journey. Descending to the Yusafzai plains he made his way to Aṭak, and when he saw one of the large eight-oared ferry boats crossing with the flood to the opposite bank of the river, he cried to the bystanders—"What long legs that creature must have!"

XXIII. The Banerí and his drowned wife.

There was once a sudden flood in the Indus which washed away numbers of people, and among others, the wife of a certain Banerí. The distracted husband was wandering along the banks of the river looking for the dead body, when a countryman accosted him thus, "O friend, if, as I am informed, your wife has been carried away in the flood, she must have floated down the stream with the rest of the poor creatures. Yet you are going up the stream." "Ah sir," answered the wretched Banerí, "you did not know that wife of mine. She always took an opposite course to every one else. And even now that she is drowned, I know full well that, if other bodies have floated down the river, hers must have floated up!"

XXIV. The man and the Bear.

One day when the river was in flood, a certain dark object was seen floating down the stream. Thereupon a poor man, mistaking it for a log of wood, plunged into the water and swimming with vigorous strokes, seized it with both his hands. When too late he discovered that he was clasped in the shaggy embrace of a bear. "Ah," cried his friends from the shore, "let him go, let him go!" "Just what I am trying to do," answered the unhappy man, "but he won't let *me* go!"*

XXV. The Crow and its young.

An old mother crow was once engaged in giving sound advice to her newly fledged young ones. "Remember" said she, "your principal enemy will be man. Whenever you detect a man in the act of even stooping towards the ground as if for a stone, at once take wing and fly." "Very good," answered one of her precocious youngsters, "but what if the man happens to have a stone already in his hand? Can you advise us how we shall proceed then?"

XXVI. The Jackal and the Fleas.†

There was once a jackal so infested with fleas that life was a burden to him. Determined to be rid of them, he sought for a pool of water, and

* Logs of deodár are frequently floated down the Indus from the Himálayas. During floods many of these logs are washed away from the "timber yards" far up in the mountains. For every log recovered the villagers along the banks receive a reward of four annas from the owners. Each log bears its owner's mark.

† The English fable of the Fox and the Fleas is almost exactly similar.

snatching up a small piece of dry wood in his mouth, he began to enter the water with 'measured steps and slow.' Gradually as he advanced, the astonished fleas rushed up his legs, and took refuge on his back. The rising water again drove them in multitudes from his back to his head, and from his head to his nose, whence they escaped on to the piece of wood which became perfectly black with them. When the sly jackal perceived the situation of his foes, he suddenly bobbed his head into the water, relinquished the wood, and with a chuckle swam back to the shore, leaving the fleas to their fate.

XXVII. The Elephant and his keeper.*

There was an elephant which was accustomed to suffer most cruel treatment at the hands of his keeper, and the keeper knowing the sagacity of these animals, and being in fear of his life, used to sleep some little distance from the tree to which the elephant was tied. One night the elephant, taking up a long loose branch, chewed the end of it in order to separate the fibres, and having twisted them in the long hair of the sleeping man, he dragged him within reach and trampled him to death.

XXVIII. The Miser and the Grain of Wheat.

A great miser was once sitting on a precipice and dangling his feet over the edge. Hunger having become insupportable, he took out his small bag of parched grain, and began to toss the food, grain by grain, into his mouth. All at once a single grain missed its destination and fell to the bottom of the ravine. "Ah what a loss!" cried he. "But even a grain of wheat is of value and only a simpleton would lose it." Whereupon he incontinently leaped down from the rock, and broke both his legs.

XXIX. The Miser and the Pice.

A miser once found his way into the bazar to buy bread. The weather was unusually warm, and as he trudged along, the perspiration gathered round the coin, which was closely clutched in his hand. Arresting his steps, he gazed at the moist piece with a fond eye and said, "I won't spend you—weep not, dear Pice, we shall not separate after all—I will starve first!" So he restored the money to his bag, and begged for scraps from door to door.

XXX. The two Misers.

Once upon a time two misers hobnobbed together to eat their food. One of them had a small vessel of ghee into which he sparingly and grudgingly dipped his morsels of bread. The other miser, observing this, protested vehemently against such wasteful extravagance. "Why waste so

* This anecdote, told by a Panjábi, probably belongs to Hindústán.

much ghee," said he; "and why do you risk the waste of so much more, seeing that your bread might slip from your fingers and become totally immersed? Think better of it, and imitate me. I take my vessel of ghee, and hang it just out of reach to a nail in the wall. Then I point at the ghee my scraps of bread, one by one, as I eat, and I assure you I not only enjoy my ghee just as well, but I make no waste."*

XXXI. The False Witness.

A caravan of merchants came and pitched for the night at a certain spot on the way down to Hindústán. In the morning it was found that the back of one of the camels was so sore, that it was considered expedient not to load him again, but to turn him loose into the wilderness. So they left him behind. The camel, after grazing about the whole day, became exceedingly thirsty, and meeting a jackal, he said to him, "Uncle, uncle, I am very thirsty. Can you show me some water?" "I can show you water" said the jackal, "but if I do, you must agree to give me a good feed of meat from your sore back." "I do agree," said the camel, "but first show me the water." So he followed his small friend, until they came to a running stream, where he drank such quantities of water that the jackal thought he would never stop. He then with some politeness invited the jackal to his repast. "Come, uncle, you can now have your supper off my back." "Nay," said the jackal, "our agreement was that I should feed not off your back, but off your tongue,† dear nephew. This you distinctly promised, if I would take you to water." "Very well," replied the camel, "produce a witness to prove your words, and you can have it so." "A witness I have and will bring him presently," replied the jackal. So he went to the Wolf, and stating the case, persuaded him to witness falsely. "You see, wolf, if I eat the tongue, the camel will certainly die, and then we shall both have a grand feed to which we can invite all our friends." The two returned to the camel and the jackal appealing to the wolf asked, "Did not I engage to show the camel to water on condition that he would give me his tongue?" "Of course you did," said the

* This anecdote is an instance of the truth of the saying of Solomon—"There is no new thing under the sun." Many readers will be reminded of the Irish dish "Potatoes and point," consisting of a large supply of potatoes and of a very limited supply of meat, bacon, or even fish. The potatoes are eaten, but the more solid fare is merely pointed at. The following passage from Carlyle's "Count Cagliostro" refers to this singular custom—"And so the catastrophe ends by bathing our poor half-dead Recipiendary first in blood, then, after some genuflexions, in water; and 'serving him a repast composed of roots,'—we grieve to say, mere *potatoes—and—point!*"

† "Sore back" in Panjábí being *chigh*, and "tongue" *jíb*, there was sufficient similarity of sound to suggest prevarication.

wolf confidently, "and the camel agreed." "Be it so;" said the camel, "as you both delight in lies and have no conscience, come and eat some of my tongue," and he lowered his head within reach of the jackal. But the latter said to the wolf, "Friend, you see what a diminutive animal I am. I am too weak to drag out that enormous tongue. Do you seize it and hold it for me." Then the wolf ventured his head into the camel's mouth to pull forward the tongue, but the camel instantly closed his powerful jaws, and crushing the skull of his enemy, he shook him to death. Meanwhile the jackal danced and skipped with glee, crying out, "Behold the fate of the false witness—behold the fate of the false witness!"*

XXXII. The Traveller and his Camel.

Once upon a time a traveller, coming along the desert road with his laden camel, stopped to rest during the noon-tide heat under a shady tree. There he fell asleep. When he awoke he looked at the camel, and finding to his sorrow that the faithful companion of all his journeys was dead, he thus apostrophized him:—

"Where is the spirit fled, ah, where,
The life that cheered the weary ways?
Could'st thou not wait one hour, nor spare
For me, thy Friend, one parting gaze?"

कहाँ गिया उह भोर जो उठावे भार नू।
चलती वार ना मिलिया इस महरम यार नू॥ †

* This story is intended as a satire on the practice which prevails so widely among the natives of all parts of India of getting up false cases and procuring false witness in courts of law.

† Literally—"Where is the spirit fled which bore the load? When leaving, it saw not me its well-known friend!"

The Rupees of the Months of the Iláhí Years of Akbar.—By Ch. J. Rodgers, *Principal, Normal College, Amritsar.*

(With two Plates.)

The work of Marsden made known the coins of Jahángír on which are struck the signs of the zodiac. These coins were in gold and silver. If I remember right Marsden gives a complete set of the signs for one year. And these were all struck at one place. But the zodiacal coins were struck at more mints than one. Ahmadábád and Ágra were, however, the chief. Asírgarh and Ágra had struck coins on which was an image of a hawk, in the time of Akbar. Ajmír struck the bacchanalian coin of Jahángír. All these coins are now so exceedingly rare that they command fabulous prices, and these prices have tempted unscrupulous men to imitate them so that the market is full of imitations of several degrees of degeneracy.

The custom of striking the month as well as the year on the coin seems to have been an old one in the East. Mr. Thomas in J. R. A. S. Vol. IX, p. 345, gives Coin No. 79 with رمضان on it, and on p. 346, No. 80 has the same month. No. 84 has محرم, No. 85 رجب, No. 86 شوال. In the British Museum Coin Catalogue, Vol. II, Oriental Coins, p. 148, coin 503 has محرم on it. This is one of Mahmúd's. My own small collection of Gazní coins has one of Mas'aúd's with the same month on it, and two coins of Maudúd, varying in other particulars of inscriptions, agree in having this same month. One of the same king has رمضان. One of Farrukhzád's coins has محرم. Dr. Stulpnagel in this Journal, Vol. XLIX, part I, 1880 edited a coin of Gyásuddín and Muizzuddín struck at Ghazní in the month ذي الحجه of the year 596 A. H. It was a common thing to say that the coin was struck في شهور during the months of such and such a year. The coins of Firwán and Ghazní and of the Sultáns of Kashmír indulge in this expression.

In my paper on the "Copper Coins of Akbar," I drew attention to the fact that the 28 coins therein figured gave the names of no less than six months of Akbar's Iláhí years. In the present paper I propose giving rupees of each month of the same years. I was in hopes that I should be able to get the whole of the months of one year struck in one place. As yet I have not succeeded in this. I have seven months of one year of Jahángír (for Jahángír struck also in the same manner as his father Akbar and used the same names of the months); six of these were struck at Láhore and one at Qandahár. Of Akbar's 49th Iláhí year I have seven rupees all of different months, but of these, two were struck at Tatta, three at Láhore, one at Ahmadábád and one at Burhánpúr. I have also one other rupee of this 49th year, but its mint I can't make out يقلور (Sítápúr ?). Of the years 46 and 48 I have rupees of five months. The whole of my collection of Akbar's rupees (I have rupees of each year of his reign except 965) enables me to give each month, and the fact that these coins were

struck at different mints in different years, will take away from the monotonous nature of a series issued from the same place. The styles of the coins issued from the Lahore mint differed very considerably as we shall see, but Ahmadábád and Tatta were rigidly monotonous in their issues.*

Up to the year 992 A. H. the coins of Akbar had been strictly orthodox in their inscriptions. The name and titles of the Emperor had occupied the obverse, the margins containing the mint &c. being in nearly all cases illegible. The reverse had gloried in the Kalimah, and its fragmentary margins were embellished with portions of the names of the four companions of Muhammad. The first rupees were round and of the size of those of Sher Shah and his successors. My first square rupee of Akbar is dated 984. Láhore and Fathpúr Sikrí seem to have begun coining square rupees in 985. After 986 for several years I have no round rupees in my cabinet. They are all square. The coins in my cabinet with Iláhí years on them begin from the 30th year. On these coins, instead of the Kalimah, we have الله اکبر جل جلاله "God is the greatest, may his brightness shine forth." The year and month and mint complete the inscriptions. The Kalimah rupees, however, did not cease being struck. I have them of 993, 994, 995, الف 1000 and 1001.

The use of the Persian months by Akbar leads us to consider what the Persian year was. Prinsep in his "Useful Tables, an appendix to the Journal of the Asiatic Society" published in 1836, gives at p. 12 a short account of "The Era of Yezdegird III or the Persian Era," and at p. 37 "The Táríkh Iláhy or Era of Akbar." In "Historia Religionis veterum Persarum eorumque Magorum" by Thos. Hyde, S. T. D. Regius Professor of Hebrew and Laudianus Professor of Arabic in the University of Oxford, published at Oxford in 1700 A. D., there is a full account of the various Persian epochs and years in Chap. XIV. In Chap. XV he gives the months in Pahlaví and Persian together with the Greek corruptions of the names. He also gives the names of the 30 days of the month in both Pahlaví and Persian. In Chap. XVI he gives the months and days of the year of Yezdegird with the names of the appended five days. In Chap. XVII he treats of "Years and Epochs in general and of the Persian year in particular." In the XIXth Chap. he shows the origin of the names of the Persian months. In the عجایب المخلوقات (a short account of the contents of which book was printed in this Journal many years ago, and which has lately been lithographed and published in India) amongst wonders many, is given a sober account of the Persian months. And again in the تقویم مؤید المورخین or کارنامهٔ نوآئین, a most useful little book of 70 pages by

* Mr. Grant has let me have a coin of Ahmadábád which is similar to the later Láhore coins of Akbar. It is of the 47th year and of the month Tír and of same type as No. 2, plate I.

Munshí Deví Pershád published by Nawal Kishore, Lakhnau, 1878 A. D (the result of five years of labour as the author tells us), in Chap. II Sect. I, p. 52 &c., we have a short but clear account of the Persian, Jalál and Iláhí years. Much more may have been written on these subjects.* I shall here give as plain and brief a notice as will suffice us for our present purpose, and I refer those who have time and opportunity to the works already mentioned and to others, for fuller and more particular information.

The Persian year was instituted by Yezdegird III eight days after the death of Muhammad. The year was divided into 365 days. There were twelve months each of which had 30 days, except the twelfth which had 35 days. The fractions of the days in 120 years made another month, so that every 120 years there were 13 months in the year. The first month was duplicated, for the first time this occurred, the second month for the second time, &c. The names of the months were :

Farwardín
Ardibihisht
Khúrdád
Tír
Amardád or Mardád
Shahríyar
Mihr
Abán
Azar
Dí
Bahman
Isfandármuz.

There were no weeks. But each day of the month was named separately. Hyde gives these names both in Persian and Pahlaví.

Malik Sháh Sultán of Khorásán improved somewhat on the above. Making his year commence on the entrance of the sun in Aries, he ordered that the year should receive an additional day whenever it was required. This was mostly as with us every fourth year. But after the day had been added seven or eight times, the addition was postponed for a year. The days were added at the end of Abán, not at the end of Isfandármuz. These days were called روز گبیسه. The five days added to the Persian year were termed خمسهٔ مسترقه. First of all the months were called—

Máh Nau
Nau Babár
Garmá Fazá

* In the History of Gujrát is a translation of the proclamation of Akbar in his 30th year about the Iláhí year.

Roz Afzún
Jahán Táb
Jahán Árái
Mihr Kán
Khazán
Surmá Fazá
Shab Afzún
Átish Afzún
Sál Afzún.

But after awhile the old Persian names were again used.

In the 30th year of Akbar, *i. e.*, in 992 A. H. Hakím Fathullah Shírází got out a new era and year for India. The object in view was to create a uniform year throughout the vast empire Akbar had conquered. The era began with the reign of Akbar, *i. e.*, on 19th February 1556. The months and days were similar to those of the Persian year. There were no intercalary days. Hence the days of this year never corresponded with the days of the Jalálí years of Malik Sháh's era. This year was termed الهي Iláhí.

The Iláhí years of Akbar's coins begin with the 30th year. He as I have already stated after a few years left off the use of the Kalimah on his coins and also the names of the four companions. To make his departure from established usage more marked, he made all his *early* Iláhí rupees *square*.

Jahángír commenced his coinage by reverting to the year of the Hejirah* and by putting the year of his reign without the use of the word *Iláhí*. It was simply ۱ سنه or ۲ سنه &c. In his 6th year (according to coins in my cabinet) or perhaps before, the Lahore mint commenced a series of coins inferior to none of Jehángír's in beauty and finish, on which were the year and month of the Iláhí year (commencing, however, from the 1st year of Jahángír) on one side, and the names of Jahángír and Akbar on the other. This series was copied at the mints of Akbarnagar, Qandahár, Jahángírnagar, Tatta, and Kashmír.

In two large square heavy rupees I have, the Iláhí month was woven into a couplet thus :—

به اردي بهشت اين سکه در لاهور زد بر زر
شهنشاه زمان شاه جهان گير ابن شاه اکبر

and again

بمـــاه تير در لاهور زد اين سکه را بر زر
ملک دين پناه شاه جهان گير ابن شاه اکبر*

* In the Cabinet of Alexander Grant, Esq., C. E. is a large *round* coin weighing 217·3 grains on which is this couplet with "Bahman" month in it.

درماه بهمن چون مه انور شد زر لاهور
بدور نور الدين جهـــان گير ابن شاه اکبر

P20722

There may be a series of couplets of this kind. Mr. Delmerick edited one with the month Isfandármuz on it, the couplet running thus :—

دراسفندار مر این سکه در لاهور زد برزر
شهنشاه *اعم شاه جهان گیز ابن شاه اکبر

My coins weigh 217 and 216 grs. Mr. Delmerick puts his down at 219 grs. Dr. Stulpnagel had some coins of this square heavy series stolen. General Cunningham in 1880 had one also. The whole of the months may, I have not the slightest doubt, be obtained in time. The twelve months of the zodiacal coins, and the twelve months of the Iláhí years of Jahángír I have already noticed would of themselves form a trio of most interesting series.†

When Jahángír died and Sháhjahán ascended the throne, the Kalimah which had been absent so many years of the reign of Jahángír from the coinage at once took its place again on the issues from all the mints. I have three rupees of Sháhjahán's first year. The one struck at Súrat has on it سنه هجري ۱۰۳۸. In another place it has سنه احد. Of his second year I have two rupees, one struck at Patna in Amardád Máh of the Iláhí year 2. It has on it the Kalimah in full, also the date 1038. The other one was struck at Multán in Abán Máh of the same year. It also has on it the Kalimah and date 1038. The series of Sháhjahán's rupees, on which the square lozenge comes, as a rule ignores the Iláhí years. One, however, which I have was struck at Bhakkhur in Abán Iláhí.

After the death of Sháhjahán no Emperor put the Iláhí months on his coin. Each rupee was dated with the year of the Hejirah, and with the year of the reign in which it was struck. The Iláhí system may be said to have died out, therefore in the early part of the reign of Sháhjahán, so far as the coinage was concerned. In the Akbar series of Iláhí rupees there is one portion on which the names of the months do not come. Only the year is there without any mint. Some of the earliest of the series are in this fashion. I have one gold one of this type and several silver ones. From their scarcity I judge them to have been proof coins. Some of them are in a beautiful state of preservation, fresh as from the mint.

Gold coins of the Iláhí years are also procurable. They are scarcer than the silver ones, but still I have no doubt that were an exhaustive, scientific and systematic search to be made, the whole of the months might

* In the B. M. there is a coin which has زمان instead of اعم

† I find in my small cabinet one of Jahangir's *gold* coins of exquisite beauty and finish has فروردین worked up into a couplet, thus.

بفروردین زر آگره فروزان است چون اختر
زنور سکـــه شاه جهان گیر ابن شاه اکبـــر

This coin weighs 219 grains but it has a small loop on it.

be eventually recovered. Of course it is late in the day now to commence. In my previous papers I have stated that old coins were getting scarcer and scarcer. In the Calcutta Review for April 1881 I showed how "Portable Indian Antiquities" were quickly and quietly disappearing from the country. Native ladies like their ornaments of pure gold and silver such as are in mohurs and rupees. English educated officers (and what officer is not now thoroughly educated) are constantly on the look out for these memorials of past glories. Hence search as we will, coins really good and old are seldom met with. One cannot help hoping that the coins in the India Office in England may be ultimately restored to India. These would form a nucleus for an Imperial collection. They are now in the British Museum for the purpose of being arranged. There are no doubt many duplicates. These should be distributed to Madras, Bombay, Kurrachee and Lahore where there are gentlemen in charge of the Museums who take a pride in their work and in the Institutions committed to their care. Beyond and above all present collections is the one belonging to General Cunningham which contains coins of greater beauty and rarity than any other. Whatever else the Government of India does, the reversion of this collection to India should be secured.

I am not so sanguine about a copper series of Akbar's Iláhí months. I have eight months now. But copper coins disappear relentlessly. Every manufacturer of copper vessels, and their number in India is legion, regards an old copper *fulús* or *sikka* of Akbar, with its 315 or so grains of good copper, as a god-send, and he melts it down or beats it out ruthlessly. As Akbar was the only Mogul who tried *to rule* India, and as mementoes of his reign are not so very numerous, we ought to have a complete collection of his coins in gold, silver, and copper. The editor of the Aín-i-Akbarí gives a few gold, silver and copper coins in the latest Lucknow edition of that work. The author of the مختصر سیر گلشن هند gives a list of *ten* coins at the end of Akbar's reign. One of these is the gold coin with figures of Rám and Sítá on it, and on the other side the month and Iláhí year, ٥٠ فروردین.* This is the coin from which all the sapient money changers of the bazaars name *all* coins with figures on them "*Sítá Rámí.*" It is also noticed by the editor of the Aín-i-Akbarí.

Akbar went on coining until his death; hence the list of mints given in the Aín is not complete or correct. There were several active mints not noticed in that work, *e. g.*, Asírgarh, Burhánpúr, Srínagar, Gobindpúr, Tatta, Fathpúr and Lahrí Bandar. I have coins of Akbar struck in all these mints except Asírgarh. But there are many mints given in the Aín from which I have not as yet seen a coin of any kind.

* On the gold coin in the British Museum there are the two figures but without any inscription in Hindí.

Besides rupees there are parts or divisions of rupees of Akbar's mints obtainable. Three coins in my cabinet average 17·2 grains.

Five coins average 42·75 grains. Five average 75·9. I have a gold Iláhí coin weighing over 186 grains. The first Iláhí rupees average about 175 grains.

Now what I should consider an exhaustive, scientific and systematic collection of Akbar's coins would include a specimen of every type struck at all his mints in different metals, weights, shapes, sizes, months and years. The possible coins to be obtained should be tabulated, and as specimens of each are obtained, each should be marked off. The collector would thus see what his *wants* were.

It seems strange that about 100 years after the time of Akbar, James II should strike coins with the names of the months on them. His gun money has months on it. I should think there are collections in England in which each month is represented. Knowing next to nothing of English coins I cannot say.

Without further prelude I will at once proceed to examine the rupees drawn in the accompanying plates. The first twelve are round ones. They all agree in the matter of reverse. It is اكبر الله كبر الله جل جلاله

The obverses are as follows, in order of the months

(1)	۴۴	فروردين الهي ضرب آگرة	Farwardín.
(2)	۴۹	اردي بهشت الهي ضرب لاهور	Ardíbihisht.
(3)	۴۳	خور داد الهي ضرب احمدآباد	Khúrdád.
(4)	۴۰	تير الهي ضرب احمد اباد	Tír.
(5)	۵۰	امرداد الهي ضرب آگرة	Amardád.
(6)	۳۹	شهريور الهي ضرب لاهور	Shahrewar.
(7)	۴۹	مهر الهي ضرب سيتاپور	Mihr
(8)	۴۹	ماه ابان الهي ضرب برهان پور	Abán.
(9)		اذر الهي ضرب لهري بندر	Azar.
(10)	۳۸	دي الهي ضرب لاهور	Dí.
(11)	۴۱	بهمن الهي ضرب احمدآباد	Bahman.
(12)	۴۵	اسفندارمز الهي ضرب برهان پور	Isfandármuz.

It will be noticed that only No. 8 has anything beyond the name of the month. This rupee has the word for month ماه on it. The ornamentation on each rupee varies according to the mint. Agra and Lahore have by far the most graceful writing on them. The inscriptions on the Ahmadábád rupees are particularly stiff and formal and ugly. I am not quite sure whether No. 7 was struck at Sítápúr or not. The mint is new to me. I have a second one of the same mint and month, but of another year. No. 9 is of a new mint—*Lahribandar*, a port of Sind now no longer known

by the people of Sind. These two mints are not in the Aín-i-Akbarí. Neither is that of Nos. 8 and 12, Burhánpúr.

It will be noticed also that none of these *round* rupees are of Akbar's early Iláhí years. The earliest I have is the 38th year (No. 10.) From the 30th year all my rupees of Akbar are square. Perhaps more fortunate collectors may possess earlier *round* Iláhí rupees.

The inscriptions on the square rupees are as follow :—

	Obverse.		Reverse.
(13)		الله اكبر	جل جلاله ٣٠ الهي
(14)		الله اكبر جل جلاله	اردي بهشت ٣٧ الهي
(15)		Do.	خورداد الهي ٣٩ ضرب تته
(16)		Do.	تير الهي ٣٩ ضرب تته
(17)		Do.	امرداد ٣٥ الهي
(18)	ضرب دهلي	Do.	ماه شهريور ٣٧ الهي
(19)	Do.	Do.	ماه مهر ٤٣ الهي
(20)	Do.	Do.	ماه ابان ٣٠ الهي
(21)		Do.	اذر الهي ٤٠ ضرب ملتان
(22)		الله اكبر جل جلاله	دي الهي ٣٦ ضرب لاهور
(23)	ضرب دهلي	Do.	ماه بهمن ٣٠ الهي
(24)		الله اكبر	جل جلاله ٣٩

I have not square rupees with the months Farwardín* and Isfandármuz on them. Hence I put in their places Nos. 13 and 24, two novelties of the Iláhí series. They are destitute of both mint and month. They have only the Iláhí years. Three of the rupees Nos. 13, 20 and 23 are of the first Iláhí year.† *Tatta*‡ is a new mint town not in the Aín-i-Akbarí. It and *Lahrí Bandar* seem to have been Akbar's only mints in Sind. Bhakkhar is in the Aín as a mint.

Nos. 13, 14, 17, and 24 are without mints on them. I have several more mintless square rupees all of great beauty.

I almost dare to indulge the hope that some day or other I shall get a complete series of square rupees of each mint. I dare not hope that I shall get one of each month of each year, for I do not think that every

* There is a Tatta one of this month in the British Museum, and since drawing the plate, I have myself obtained one, through the generosity of my friend W. Theobald, Esq., struck at Dehli in 37 Iláhí.

† I have since obtained a fourth of the month Dí struck at Dehlí. This gives me three Dehlí rupees all struck in the first Iláhí year of Akbar, *i. e.*, the 30th of his reign.

‡ There is a possibility that this mint may be Patna. The coins are, however, so rough that they do not in any way resemble some remarkably fine coins I have, struck undoubtedly at Patna.

mint was always so busy as to issue rupees monthly for a series of years Many mints of Akbar's are as yet unrepresented in my cabinet. My means are small: my opportunities few. I cannot afford to purchase all I see. Those I have given will, however, convince my co-workers in numismatics that the coinage of Akbar offers a field worthy of being searched in. The results give us variety in inscriptions, in mints and in execution.

The weights are given to each rupee, the figures underneath the bar indicating the No. of grains in each case.

Notes on the remains of portions of Old Fort William discovered during the erection of the East Indian Railway Company's Offices.—By R. Roskell Bayne.

I presume that I may take it for granted that most of my readers know from "Orme's History of the Military Transactions of the British Nation in Indostan" published in 1778, something of the locality and the form of the first Fort William. To those who do not, Vol. II, Book VI, headed "the war in Bengal", of the above work will give a very good general idea of it, and the Map of "Calcutta in 1756" contains much interesting information that has been of considerable use and guidance to me. In p. 62, from Orme's account of Old Fort William we read as follows:

"The fort of Calcutta, called Fort William, was situated near the river, and nearly half way between the northern and southern extremities of the Company's territory. Its sides to the east and west extended 210 yards; the southern side 130, and the northern 100: it had four bastions, mounting each 10 guns: the curtains were only four feet thick, and, like the factory of Cossimbazar, terraces, which were the roofs of chambers, formed the top of the ramparts; and windows belonging to these chambers were in several places opened in the curtains: the gateway on the eastern side projected, and mounted five guns, three in front, and one on each flank towards the bastions: under the western face and on the brink of the river, was a line of heavy cannon, mounted in embrasures of solid masonry; and this work was joined to the two western bastions by two slender walls, in each of which was a gate of palisadoes. In the year 1747 warehouses had been built contiguous to the southern curtain, and projecting on the outside, between the two bastions, rendered them useless to one another; however, the terraces of these warehouses were strong enough to bear the firing of three-pounders which were mounted in barbette over a slight parapet."

Fort William was not the first Fort built by the English Traders in Bengal; that at Hugli had been erected either at the first voyage to Bengal or soon after, about 1640; it was called a Factory, and the Mogul Empire jealously prevented anything like a bastion being erected about it.

In 1696 on the outbreak of a war between the Rajas on the western side of the river Hugli and the Mogul Empire, the three European settlements were allowed to enclose their factories for the protection of their goods, and says Orme, "they, taking for granted what was not positively forbidden, with great diligence raised walls with bastions round their factories." Such was the origin of Hugli, Chandernagore and Calcutta Forts. Calcutta is then described as a small town contiguous to Sootanutty: we may ascribe the date of 1696 to the first Fort William as an enclosed fort.

In 1753, the Mahratta ditch was dug, originally intended to be seven miles long, only three were completed, this was a work carried out at the request and "at the cost," so says Orme (p. 45), "of the Indian inhabitants of the colony." He remarks, "Allaverdy made no objection to this work, and moreover permitted the English the same year to raise a rampart with bastions of brickwork round their factory at Cossimbazar." This, I am inclined to think, must have been the date of the addition of the outer bastions of Fort William; which, as I shall be able to shew, are additions. I, however, cannot find any direct allusion to their being built.

In 1756, repairs to the fort were begun in compliance with orders from the Court of Directors. Holwell writing in a letter, dated November 30th, 1756, says—"On the receipt of your letter by the Delawar in April we began to put the settlement into as good a posture of defence as we could, and as the parapet and embrazures as well as the gun carriages to the westward of the fort were much out of repair, they became the first object of our attention; a number of workmen were employed, and I believe the parapet and embrazures, the greater part of which we were obliged to pull down, were more than half run up—when they were stopped by a Purwannah from the Suba."

That these repairs had been going on for some time past, and that they were extensive, is evident from the fact that considerable diligence had been employed in excluding spies from the city who had reported that the place was being fortified.

The excuse sent was to the effect that war had broken out between England and France, and in order to prevent their factory from being taken by the French, they state, "we were only repairing our line of guns to the water side," which Orme states "extended on the brink of the river in front of the western side of the fort."

I have prepared a plan, Plate X, from a portion of Simm's Map, which

is a particularly accurate survey shewing the buildings as they stood in 1847, and over it I have shewn the fort in a thick outline, following Orme's measurements for the south curtain and the length of the east and west sides. The measurements taken by me comprised the whole of the north east bastion, a portion of the north west sufficient to determine its junction with the curtains, all the north curtain with about 150 feet of each of the east and west curtains. All these dimensions I have accurately taken, and with them and Orme's figures, I have laid out the east the west and also the south sides.

Measurements made on this Map near the north west bastion at its junction with the curtain wall to the river are as follows: water line in 1756 about 70 feet, in 1847-49, 425 feet, to Jetty edge of to-day, 1882, very nearly 800 feet. They serve to shew how the river bank has been pushed west.

The second or larger scale Plan, Plate XI, that I have prepared, shews the outline of the buildings newly erected. The walls which are tinted black are the walls and bastions of the first erected fort; whether the small inner square of the north west corner should be shewn as belonging to the old Fort, I cannot now say as I failed to note if the work butted or bonded into the curtains. The lighter tint shews the bastions erected *after* the square towers, with faces, flanks and salient. The next lighter tint shews some inner walls, always in brickwork in mud, and running parallel to the curtains, and about 13 to 14 feet within them. Occasionally I find a cross wall, but I have failed to note them all, or I have missed them.

I have also shewn on this plan such drains as I found. The regularly formed building in the centre, it will be seen, I have called the Carpenter's shop. The small diagrams to a larger scale are the sections of walls, Plates XII and XIII, drains etc.

The whole of the dimensions recorded were made by myself in order to ensure a faithful record of what I found.

The small perspective sketch, Plate XIV, has been made from the measured plan and filled in from a little pencil sketch made in my note book at the time; at no period of the excavation was it laid as completely bare as is here shewn, I was hurrying on with the work of building the Company's offices and had no time to stop to expose the whole at a time.

I will now proceed to recount to you what I found, as nearly as I can, in the order in which I found the works shewn on my plans.

On January 2nd, 1880, I opened the ground on which the East India Railway Company's offices are built. It had just been cleared to floor level of some Custom House sheds built at various periods, some I believe as recently as 1866. I took the curb level at the junction of Clive Street and Fairlie Place as my datum for levels, calling it 101·5. The general

level of the floors of the godowns was about 1·0" above this. The floor of the new building, to which I shall have to refer in a comparison of levels, is 1·5 feet above my datum or 103·00.

In starting the setting out of my foundations I selected as a commencement the longest straight wall; it is a wall 220 feet long. Before we had been at work excavating a day, I might almost say a few hours, we found we were on an old wall, the full length of our proposed wall, and almost in exact alignment with it and 4 feet thick.

Knowing as I did that I was in the locality of old Fort William, I inferred that I was on the wall or one of the walls of the Fort, and I proceeded at once to dig down at its side in three or four places in order to see how far it went down and what it was like. I found it went down nearly two feet below the level at which it had been decided our walls and concrete were to go, and as it was a good straight solid wall with a fair base, it was decided to build on it in place of pulling it up. Its base being smaller than our calculated areas and pressures, it has a greater load than the one ton to the foot of the other walls; its load is 1¼ tons, but its solidity has warranted the use made of it, and it saved some two or three thousand Rupees. In addition the wall, buried though it be, we know it to be there, it has not been annihilated.

In setting out this 220 feet wall of the new building, I had been guided by the curb stone of the footpath of Fairlie Place, and had laid out my wall parallel to it. I now found, (after it had been settled to make use of the wall), that it was 9 in. in its length out of parallel with the curb, so in order to utilize the wall, I had to throw my centre line longitudinally westward to the north and eastward to the south on a centre point 9 in. each way, and my new wall then lay exactly over the centre of the wall that proved to be the north curtain of old Fort William. I mention this in detail, as I wish to call attention to the very close alignment of streets of to-day with those shewn on the small Map that accompanies Orme's Vol. II, already referred to. The plan is headed—"Plan for the intelligence of the Military Operations in Calcutta when attacked and taken by Seeraj-ul Dowleh, 1756"—I shall have occasion later on to call attention to this close adherence to old lines of streets, this case I think a very remarkable one.

So soon as I had satisfied myself that this wall was a part of the old Fort, I narrowly watched the excavations following it and began to keep a careful record of the walls as they were exposed. Immediately following this discovery of the north curtain wall, I found we were on some very heavy and closely built walls that soon proclaimed themselves in their raking lines as the flanks and faces of a bastion. As far as I possibly could, without delaying my work, I had the earth from between the walls

excavated before the demolition of the walls themselves was begun, as it may be imagined there was very little of the old walls left, for the corners of the new building, made up as they are of a main staircase, bath-rooms and urinals, implies a network of cross walls in the new work. In every case the old walls go down some two feet below the new walls, and in some cases (the north face wall for example) have a slice cut off their inner face from nil at one end to one or two feet at the other, and so we cut and sliced them to make way for our foundations. About this time we found the walls of a staircase or ramp in the junction of the north curtain wall and the old square bastion of the earlier construction. There was another, a stair, at the corresponding corner at the south-east bastion ; for Holwell tells us at the time the prisoners were in the verandah near the Governor's House : "Besides the guard over us, another was placed at the foot of the stairs at the south end of this verandah leading up to the south-east bastion to prevent any of us escaping that way."

As I have already said, the fort walls were founded at a lower level than the walls of the new building by 2 feet, so that below our foundations, would still be found a map as it were of the old Fort.

I now found that the outer bastion with its flanking faces and salient was a later work, as the junctions of the flank walls with the older curtains butted and did not bond, in addition the old plaster surface had not been taken off but the new work was built against it. I afterwards found this to be the case with the north-west bastion, which, as will be seen, had not a square bastion similar to the north-east corner.

The walls were battered with a fall in of about one in ten, and the outer faces were finished with a thin coat of lime plaster of a rich crimson tint, and reticulated in imitation of stone work, the stones being about 1·6 long by about 9 to 10 in. deep. This was the case with both the bastions.

It struck me, as I exposed this deep red plaster, that probably this factory bastion would be called the Lall Killa (Red Fort), and it suggested itself to me that the Lall Diggee (Red Tank) may have taken its name from the Red Fort.

All this work of the bastions, more particularly the later portion, was of very good material and excessively hard to break into. The bricks of all their old works were $7\frac{1}{2} \times 4 \times 1\frac{1}{2}$. The lime used here was shell lime. We often found large oyster shells, of a size that would weigh a seer to a seer and a half, embedded in the wall, and by the hundreds strewn about and buried in the fillings.

The spaces between the older walls of the bastion were loose earth filling and no floor, the spaces behind the new bastion faces and flanks were paved brick on edge. The level of this paving and the bottom edge of the external plaster was 98·00, or 3·6 below my datum line, 5·0 below

the floor level of the new building. On a corner of the plaster in the passage way behind the bastion north face was a bench mark, consisting of an inverted arrow-head, in black on the white plaster.

Of the east curtain wall we saw but little, only where we cut through it with our cross walls, and it began to be a matter of regret whenever we had to cut through it, it was such a labour and toil and caused such delay.

The soil to the north curtain wall appeared to have been but little disturbed, and so far as I noted. to keep about the level of the plaster noted in the north-east bastion. Unfortunately a little north of this wall there had been a wall of the Custom House sheds that had disturbed the soil, but as a rule the level seemed, as far as my observation went pretty regular. On the east curtain wall there had been little or no disturbance, the soil was often quite undisturbed, and only here and there were potsherds in it.

I could not make much of the north-west bastion; it was nothing like so regularly built, and had not the older inner square tower (unless the two square walls shewn on my plan belonged to it), there was no ramp or stair to the roof that I noted, and altogether it was very confused, and we were pushing on with concrete and walls, that there was no time to wait until disjointed fragments could be read and understood. Here I find at least that the old walls of the north and west curtains met with a small rounded corner, as the older plaster was still on the walls where the newer work butted it. This bastion appears to me to have been of very much smaller size. Added to all this I had not the opportunity of exposing the salient, as I had done in the north-east one.

As already stated the east and west curtain walls I have traced for 140 feet south.

In one place in the east wall I found, what appeared to me to be a sill of a door and a plastered jamb, but a Custom House wall had gone through the old wall about here, and so obliterated it that I could not make certain of it. On the north curtain wall there was neither break nor opening.

My next discovery of interest was a shed that had evidently been built an open one, and afterwards enclosed. It was 90 feet long by 40 feet wide, built parallel to the north curtain wall with a row of 8 piers down the centre, just such a flat-roofed godown on brick piers as is to be found all over Calcutta to-day. Down the centre face of each pier had been a sunk water channel, all were visible at floor line and the shallow drain on the north side into which they ran was perfect. The spaces between the columns on the faces had been filled in, thus turning an open into a closed shed.

The floor of this shed was brick on edge, and all over the floor in some places 1½, in others up to 8 or 9 inches in thickness was burnt wood ash, the floor of the godown in places where I had to cut through it bearing

traces of severe fire. This place I identify as the Carpenters' shop, and to which I will draw attention later on. The floor of this godown was 98·28 which makes it very nearly 4·9″ below our present ground floor level. The wall plaster was uninjured, but we know that lime plaster will bear without injury a severe fire. The wood ash I take to be the debris at the time of the burning of the fort; above it, as will be seen from my section, is the khoa debris from a roof fallen by fire or demolition. It evidently was never cleared out after the fire, but had become a heap of rubbish, and so built over by the succeeding floor, shewn at the next higher level. Along the north wall of this shed I found large heaps of cinder with pieces vitrified as if from a forge. The earth to the north was about 1·9′ below the floor level of the shed.

I now come to the lightly tinted walls behind and parallel to the curtain walls. They vary in width, as will be seen from the plan, in no case 18 feet, the dimension given by Holwell of the "Black Hole". In one place only did I find any outer verandah, namely, on the west wall.

In every case these walls were of brickwork in mud, at least that portion that I found below the ground. They were very deep, almost as deep as the curtain walls, and very thick, all of them made of very thin 1½ brick. In a few places I found cross walls, and I find in my note book a note to the following effect: "behind the 3′ 0″ mud walls, the space seems to be divided into cells." I do not, however, find actual record of more than a few of these cross walls. I would very probably miss them, as, if there were but few, it would be quite a chance my coming on to them, and unless my walls or column foundations coincided with them, I should of course miss them, and I had no time to spend over searching for them. I could do little more than note and record what I came across.

I have a particular object in specially drawing attention to these inner walls and chambers which, as will be anticipated, points to the locality, size and character of the Black Hole, but this I will postpone until I have described the walls etc., found, only repeating that my explanation of not always finding the cross walls of the chambers equally applies to my not finding the outer verandahs corresponding to those of the Black Hole. I simply did not hit on them in the foundations of my walls, or it may be that the "court of guard" rooms *only* had a verandah. Along that portion of the west wall, also alongside an entrance door to be alluded to presently, and where most probably a guard would be stationed and would require a verandah, did I find verandah foundations.

I will return to the western wall, but before describing it, I must remark that as the walls of the new building running north and south approached the west, I found the natural ground sloped west, and that the drain followed a depression, which by the time it reached the west curtain wall had grown

almost into a creek, compelling me to put in the foundations of the last two walls 3, 4 and 5 feet below the other walls, and the soil there was black, stinking river mud full of pot-sherds, and here we found a great many boars tusks of a small size.

Following the west curtain wall from the north west bastion, and about 45 feet from it, we found a Sumph into which the drains all emptied, or over which as we found them they all ended. We came on to this Sumph from behind, and before we actually found out what it was, we had destroyed its east face, and the loose filling caved in from the top as we cleared it out at the bottom, thus proclaiming its nature.

The main drain, that running from beyond the Carpenters' shop, I had traced right up to the west curtain wall. I have shewn it in section in fig. 3, Plate XII, it was a parallel-sided drain, at the upper end not more than 6 in. wide, widening to 13 in. at the lower end, and everywhere filled up with black mould. Over it and burying it was a later drain, a broad saucer drain, that in its turn had become filled in and buried. The two drains kept the same course; it was only the last 75 or 80 feet that the second drain was found. The Sumph into which these drains emptied was about 3'·6" square, and as I have said, coming on as we did from the side of an opened trench, we had destroyed it in part before we knew what it was, so that we did not see the entry of the two drains into it. The parallel-sided and lower drain fell fast toward the Sumph nearly 2 feet in 10; where we had cut across it, we found it full of pot-sherds, a coarse glazed blue and white ware, not a scrap of old willow pattern, square ended broken glass bottles, a black loamy earth, and a few very coarse thick pipe stems and bowls. We cleared out about 4 feet of this drain, tunelling as it were into it and then ceased.

The Sumph had been filled in with brick rubbish very loosely, so that the filling was full of cavities into which water had filtered, leaving on all the bricks a thin deposit of clay. This Sumph was nearly perfect up to about the second level of floors and material, above the rest the road ran. On emptying this Sumph we found on its western face a low arch with a versed sine of about 6 in. and above the floor of the Sumph. Into this opening we thrust a rod and found it 3 feet deep with water; probing 3 feet deep, we could feel a bottom of brickwork; we then tried it horizontally, and thrust our rod into vacuity; we tried a second and a third time and at last, finding that 20 feet found no end, we concluded it to be a drain.

As we had found water of which we were in want for our building operations, we decided to make use of it, and sank out to the bottom of the culvert which we then found to be a parallel-sided drain 2·6" wide and 3 feet 6 high with an arched bottom and top; on a man trying to go into the drain we found it silted up about 2 feet deep. We put up a one H. P. Ryder Engine, and for 12 months drew water from this source. The water was perfectly clear and limpid. The workmen all drank of it.

Since the completion of the building a man hole has been sunk over this culvert, 45 feet to the west of the curtain, and a Tangye Engine has now drawn for 21 months about 10,000 gallons of water a day from it. At a point, 30 feet beyond this well and to the west, is an iron grating, so I have been told by the coolies who have been into the drain to clean it out. The culvert falls about 15 inches in 30 feet from the well to the grating. The old Sumph was filled in on the completion of the work and not destroyed.

The water is clearly river water as a green vegetation grows over it in the hot weather, precisely similar to a vegetation growing over the Chand Pál water in an adjoining tank pumped direct from the River, so that there is still existing some communication or filtration.

To continue my account of the west wall, at 65 feet from the flank wall of the bastion I found one jamb of a doorway in a wall 6 feet thick. This extra thickness of wall I could not understand at first, but on consideration I could see that the wall had been thickened on account of the door opening, and on looking for the other jamb I found a Custom House wall had passed through and destroyed it. I then looked for and found the extent of the thickened wall, which I found to be 16 feet wide, leaving an opening of 8′·4″. There is a change of level in the pavement, inside and out, in this door opening; they both have been additions on the date of the wall as the plaster jambs go below both floors. On finding this door in the curtain wall I dug west, following the pavement and looking for the rampart wall which I found at 25 feet distance. I looked for this, guided by the Panorama of Calcutta in Orme's Vol. II. Again referring to his plan, I could see that I was not at the limit of the ground west of the curtain, so I continued my searching west, until at 45 feet from the curtain wall I found a second wall 2′·6″ thick and parallel with the first and second walls; this I take to be the River or Quay wall. The doorway of the rampart wall measures 7′·1″ wide, it has a stone sill in the opening, and here again the paving has been added since the door was originally built, as the plaster jambs and step go behind and below the pavement. These doors are the River side entrances alluded to by Holwell in his letter of November 30th, 1756 in which he states that "The Suba from his litter returned my salaam," this was on his resigning his sword "and moved round to the northward and entered the fort by the small western gate." These two outer walls I have found again further south. The entire space, so far as I have found it between the curtain wall and the next wall west, is paved with a brick on edge, a good large 10 inch brick well burnt, laid in sand or soorkey on a brick flat which is laid on 2 or 3 inches of burnt wood ash, the whole forming a good level well laid floor. In places at a lower level of 4½ I find this floor again inside the curtain wall. I found it

the whole length of the north curtain, between it and the mud and brick wall. I do not know if on the west side it only occurs in the gateway or if it continues north and south, I do not recollect it to the north towards the Sumph, but I found it further south in some gun platforms I have yet to describe. These details I have just described I found since the completion of the building, and on searching for some information as to a wall on which I found myself in doubt when preparing the diagrams for this paper.

In putting in the drain pipe from our latrines I cut through what appears to me to have been a sunken gun platform and the commencement of a second to the south. There were three steps down into it, plastered with splayed edges almost as if new, so perfect was the plaster and the edges. The three steps were respectively 6″, 8″ and 4 inches in one place, the 8″ and the 4″ uniting into one of 12″; the change had been broken away before I saw it. The curtain wall had a sunken face in it, thus thinning it to about 3 feet. This work was all addition as there were plaster faces behind the platform work. The outer face of this curtain was in some cases plastered, in some only whitewashed.

I imagine these to be some of the hurried works taken in hand, as alluded to by Orme, at the time the fort was assailed.

I would point out here (shewn on the Plan, Pl. X, O and Pl. XI) the verandah foundations opposite this western gate the only place in which I have found signs of verandahs. I do not now understand the cross wall shewn in my plan opposite the entrance gate. On the east face of this verandah wall was a very perfect surface drain, with a second one coming into it. I have no record of cutting through this verandah wall when putting in the drain already alluded to, so that I presume it stops short of the gun platform. This completes my notes of this wall.

I particularly drew attention to the inner parallel walls behind all the curtains, north, east and west, referring to Orme's description of the fort telling us of these inner walls. I have drawn to a small scale, Fig. 5 Plate XIII, the south-east bastion, reproducing the north-east bastion with its stairs to the terrace. My authority for shewing these stairs at this bastion I have already cited from Orme.

From the small map in Orme's Vol. II, of Calcutta, I make the centre gateway to be about 180 feet from the south-east bastion. I have shewn in my conjectural plan this central portion as having 94 feet clear width inside and 100 feet outside. I scale this projecting portion as 10 feet, and Orme tells us it had one gun on each flank, for which I have allowed a projection of about 12 feet, whether more or less, does not affect what I want to draw attention to. On the right, so called by Holwell, that is the south, I have put the room of the guard allowing a small verandah on the north, of 10 feet

in width; the room itself I have shewn 20 feet. The barracks behind it I shew as 40 feet. I next shew a chamber 17 feet wide; this, as will be seen, brings us up to the face of the square bastion, the first built portion of the Fort. So that we have only to shorten by one foot the barracks, or the room of the guard, or the space inside the gate, to make up this dimension to 18 feet. In any case here undoubtedly was the Military Prison, the Black Hole, so called by soldiers themselves, not so called, as many suppose, because of the events that occurred here.

I have drawn your attention to a shed which I have called the Carpenters' shop. I will now quote a few lines from Holwell's account of the closing events of the 20th June.

"As soon as it was dark, we were all, without distinction directed by the guard over us, to collect ourselves into one body, and sit down quietly under the arched verandah or piazza to the west of the Black Hole prison, and the barracks to the left of the court of guard; and just over against the windows of the Governor's easterly apartments. Besides the guard over us, another was placed at the foot of the stairs at the south end of this verandah, leading up to the south-east bastion, to prevent any of us escaping that way. On the parade (where you will remember the two twenty-four pounders stood) were also drawn up about four or five hundred gun-men with lighted matches.

"At this time the factory was in flames to the right and left of us; to the right the Armory and Laboratory; to the left the Carpenters' yard: though at this time we imagined it was the Cotta-warehouses.* Various were our conjectures on this appearance; the fire advanced with rapidity on both sides; and it was the prevailing opinion, that they intended suffocating us between the two fires: and this notion was confirmed by the appearance, about half an hour past seven, of some officers and people with lighted torches in their hands, who went into all the apartments under the easterly curtain to the right of us; to which we apprehended they were setting fire, to expedite their scheme of burning us. On this we presently came to a resolution, of rushing on the guard, seizing their scymitars and attacking the troops upon the parade, rather than be thus tamely roasted to death. But to be satisfied of their intentions, I advanced, at the request of Messrs. Baillie, Jenks and Revely, to see if they were really setting fire to the apartments, and found the contrary; for in fact, as it appeared afterwards, they were only searching for a place to confine us in: the last they examined being the barracks of the court of guard behind us.

"They ordered us all to rise and go into the barracks to the left of the court of guard. The barracks, you may remember, have a large

* The Company's cloth warehouses.

wooden platform for the soldiers to sleep on, and are open to the west by arches and a small parapet-wall, corresponding to the arches of the verandah without. In we went most readily, and were pleasing ourselves with the prospect of passing a comfortable night on the platform, little dreaming of the infernal apartments in reserve for us. For we were no sooner all within the barracks, than the guard advanced to the inner arches and parapet-wall; and, with their muskets presented, ordered us to go into the room at the furthermost end of the barracks, commonly called the Black Hole prison; whilst others from the court of guard, with clubs and drawn scimitars, pressed upon those of us next to them.

"Figure to yourself, my friend, if possible, the situation of a hundred and forty-six wretches, exhausted by continual fatigue and action, thus crammed together in a cube of about eighteen feet, in a close sultry night, in Bengal, shut up to the eastward and southward (the only quarters from whence air could reach us) by dead walls, and by a wall and door to the north, open only to the westward by two windows, strongly barred with iron, from which we could receive scarce any the least circulation of fresh air."

I do not think there is any room to doubt now the *exact* locality of the Black Hole.

In the plan attached I think it is on the spot marked N (on Plate X) and if my scaling from Orme's Map is correct, and if his 210 yards given as the length of the east face is correct, the foundations of the building still remain, and their exact locality could with very little trouble or expense be found, because, as I have stated, these verandah walls go down very deep, deeper than the Custom House shed walls, and would consequently be, as I found those to the north, undisturbed. The salient and the faces of this bastion there is no doubt have been destroyed by the Post Office buildings, but the inner corner of the older square bastion appears to me to have fallen beyond the Post Office building, if, as I have said, Orme's figures are correct; and as I have shown they are *exact* on the north face.

I would now draw attention to the south-west corner. It will be seen that a considerable portion of this lies beyond the old Military Accounts Office. If the building is condemned as one to come down, I do hope attention will be called to obtaining a faithful record of all to be found here, and I am persuaded that all the bastion foundations will be found below those of the house as intact as I found those of the north-east bastion.

An expenditure of 150 Rupees judiciously applied would enable us to determine a good deal more of the fort walls without disturbing any building or breaking up any floors.

To return again to the levels of the old fort, I would draw attention

to the floor and differences of level. The Carpenters' shop, for instance, with its floor of brick on edge over 3 in. of fine concrete laid on 3 in. of brick rubbish; going upwards above this floor, wood ash, and the debris from the destroyed roof, then a tile floor on concrete 1'-5" above the first floor, then again over that 1"-6" of rubbish, and then a metaled road, that in this place ran between two Custom House sheds; then, if I had made my section through one of the sheds, its floor of brick on edge over brick flat, and now again the floors of the new buildings, of stone pavement on 6 in. of concrete or 8 in. of concrete with Portland cement finishing. These two last are four feet nine inches above that of the Carpenters' shed of 1756. Thus there are four floors in succession, first that of 1756, then the tile floor, age doubtful, then one of 1866, and now the new one of 1883.

I have incidentally referred to the streets shewn on Orme's map, comparing them with those of to-day. In the extract from Simm's Map, on which I have shewn by a thick dotted line the water edge as shewn on Orme's map, a ghaut will be noticed that does not quite fit in with the end of Khoyla Ghaut Street. This non-fit is due I fancy to an error in Orme's map increased by my plotting from a map without a scale. I have, however, adhered closely to what I have measured or scaled, and have not cooked my dimensions in order to make them fit in. The angle of the street is exactly as at the present time.

The wide opening in Clive Street opposite the Bonded Ware Houses, and the little bend west at the head of Clive Ghaut Street are as exact as this small scale could shew them. Church Lane is another accurately fitting bit, and so in fact are numerous others.

Judging from the Map already referred to, "the Park," now Dalhousie Square or Lall Diggee, appears to me to have extended itself north a little, and the road on the north of it to have been correspondingly narrowed.

I have shewn on the Plan (Plate X) the place which I conjecture to be the un- finished Ravelin, into the ditch of which Holwell says "the dead bodies were next morning thrown."

At the time the drainage pipe was put down in Fairlie Place, Mr. Bradford Leslie, then Engineer to the Municipality, noted that they had to cut through a pucca ghaut exactly opposite the lane leading up to No. 2 Fairlie Place. It agrees exactly with the ghaut shewn on Orme's map, and also on the perspective sketch from the river side. This is a valuable piece of confirmatory evidence of the correctness of this plan and the old line of river bank at that date.

Nothing of interest was found in the excavations save a chain shot or two, some 30 or 40 cannon ball of varying sizes, and of malleable iron, some almost bullets in size; these were mostly found at the west end of the Carpenters' shop and outside it. The breach end of an old 10 pounder

gun, and the top end and ring of an old anchor stock was all that was turned up.

In conclusion, I would here note a record I have made of the building, and of the extreme point of the north-east bastion (the salient as it is termed).

Whilst rounding off the corner of our boundary wall so as to ease the foot traffic passing it, I have secured the little bit of triangular land belonging to the building by paving it, and on this paving I have had cut, in the northern line of the bastion face and on the eastern edge, a line parallel to the eastern face but two feet removed within it, as the actual line lies below the foot path and off the East Indian Railway land.

I would have liked to have placed a small tablet here to record one fixed point of the old fort, but as I was spending money belonging to the Government of Bengal, I could not do it. The stone to carry a tablet is inserted, ready if at any time the money to pay for the tablet is forthcoming. My idea was a brass plate with an engraving on it of the outline of the fort and a short legend of explanation.

I would solicit permission to make a few excavations here and there in the Custom House compound. Digging a few holes does not cost very much, and with the north portion of the fort and lines to start with, the exact spots could be indicated without much guess work or hunting for them.

I think an excavation (I don't ask for it) at a place measured from the point of the central or east gate drawn east, and about 100 feet east of the east curtain would find the burial place of the victims of the night of June 20th, 1756.

I do not know if any records were kept of what was found during the building of the Post Office north-east corner, I fear none. It was stated that when the Port Commissioners offices were built, some of the foundations then uncovered were those of the fort. A glance at Simms Map, now that we have the north curtain fixed, will shew that this cannot have been the case, as this site in 1756 lay in the river or at least beyond the river wall of the fort, and in the mud banks.

In the excavation for the buildings now going on in Koyla Ghaut Street, the river wall shewn in Orme's map should have been found just about here, but as I have found this river wall to be only a small wall, 2′.6″ thick, it would probably escape detection amongst such a maze of walls, and of so many ages. I was repeatedly over these excavations to see if anything of interest was to be found.

One wall I found, a battering wall 2′·10″ thick, 2′·3″ at an upper point, but it was too far inland to be the river wall. The character of the work, however, was the same as that found in the inner walls of the Fort, partly

bricks in mortar, partly in mud; on the outer face the earth sloped Riverwards as if tipped in from the wall; it had behind it a sort of floor roughly laid, small khoa over a large quantity of oyster shells and brick rubbish.

Essays on Bihárí Declension and Conjugation.—*By* G. A. Grierson, B. C. S.

A. Introductory.

The dialects of the Bihárí* language present many interesting facts to the student of philology. Hitherto only two of these dialects have been thoroughly investigated, and each of these in one special form. Dr Hoernle's Grammar treats of the Bhojpúrí dialect as spoken near Banáras, where it is by no means free from the influence of its neighbour the Baiswárí, and the present author's Maithilí grammar treats mainly of the standard dialect of the centre of Mithilá. The Mágadhí dialect has not been treated of in any form, but it will be found a most useful object of study, as showing the stepping-stone between the somewhat archaic forms contained in standard Maithilí, and the more phonetically attrited forms which we find in Bhojpúrí. The last language, extending to nearly the centre of Hindústán, and spoken by a warlike energetic race may be considered as the most phonetically advanced of the three Bihárí dialects. Its people have no literature to which their speech can be referred, and with the energy peculiar to their race they have disembarrased themselves to a large extent of the somewhat cumbrous grammatical forms of their ancestors, and have succeeded in wearing down periphrases and compounds into new words bearing no outward sign of their origin. The inhabitants of Mithilá, on the contrary, intensely conservative from beyond historic times,† and possessing a literature dating from the fourteenth century, have changed their language but little during all this period. As Maithilí was born at the time when the Gauḍian languages first emerged from the Prákṛit, so it has remained to the present day, and the herd-boy, as he tends his buffaloes in 1882, speaks the same language as that in which the old master-singer Vidyápati sang of the loves of Rádhá and Kṛishṇa to king Siv Singh five centuries ago. It is to Maithilí therefore that we must look for the earliest forms of Bihárí declension, and if we do we shall rarely be disap-

* This is the name which I have adopted here and elsewhere for the "Eastern Hindí language" treated of by Dr. Hoernle in his Gauḍian Grammar.

† At the marriage of Sítá, which took place at Janakapura in Mithilá, Rám is said, in Maithil tradition, to have cursed the haughty Maithil Bráhmaṇs, who refused to hold any account of the foreign prince from Audh. The curse runs,

गर्वे गूरा, रणे भीता, परस्परविरोधिन: ।
कुलाभिमानिनो यूयं मिथिलायां भविष्यथ ॥

pointed. Mágadhí all this time held a middle course. Its peculiar home was the hilly country about Bihár and Gayá, where there was little intercourse with other tribes, and little mental or material progress. It had no literature, and therefore nothing to retard, while it had little to aid its progress. Hence its middle position between the antique Maithilí, and the practical work-a-day Bhojpúrí.

The object of these papers is to bring to a common focus all the information which I have collected concerning the dialects of Bihár, and to lay them in this shape before the Society. I shall treat mainly of the following dialects:

A. Bhojpúrí, spoken in west Bihár.
B. Mágadhí, spoken in south Bihár.
C. Maithilí, spoken in north and east Bihár.

Of the last there are two sub-dialects.

1. North Maithilí spoken in north Tirhut and Bhagalpúr.
2. South Maithilí spoken in south-east Tirhut, and north Munger.

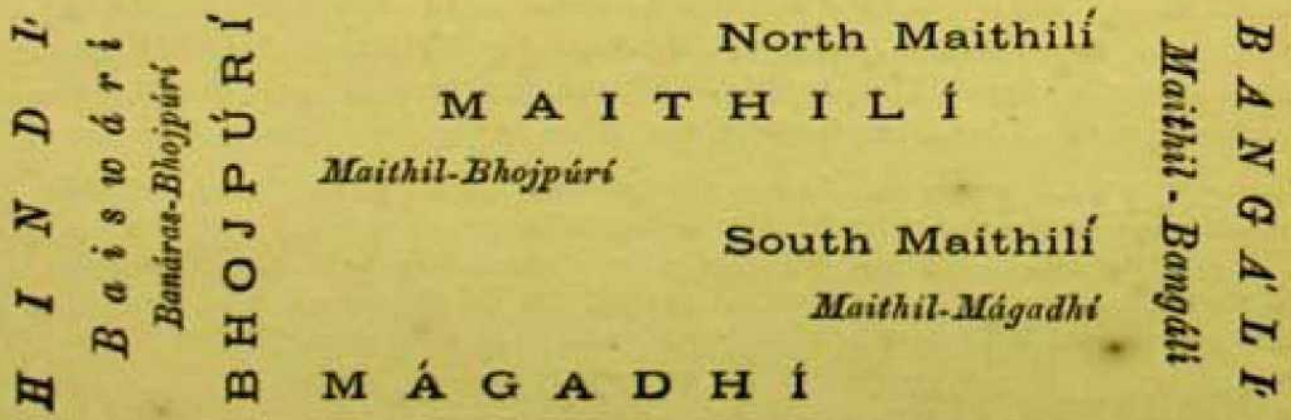
Besides these the dialects of language borderlands will be considered, *viz.*:—

A. The Baiswárí of the Rámáyan of Tulsí Dás, which is the border dialect between Bihárí (Bhojpúrí) and Hindí.
B. The dialects of the border land between Bihárí (Maithilí) and Bangálí, spoken in (1) south Bhagalpúr, and (2) central and western Purniyá.

I shall also have occasion to refer to the dialects of dialect borderlands, *viz.*:

A. Maithilí-Bhojpúrí of south-west Tirhut.
B. Maithilí-Mágadhí of south Munger.

There is not any borderland of importance between Mágadhí and Bhojpúrí. The following table shows the relative positions of these dialects and sub-dialects.



B. Declension.

I. *Case.*

I divide the consideration of this point into two heads:

α. Organic declension.

β. Inorganic declension.

By organic declension, I mean that kind of declension which is not formed by postpositions, but by actual inflection. By inorganic declension I mean that kind of declension which is formed by postpositions added to a base whether inflected or not.

In Bihárí there is a very full organic declension in the singular number. It is found in its fullest form in the north Maithilí dialect, and the terminations are as follows. They can only be added to the weak* form of a noun.

	Baiswárí of Rámáyan.	North Maithilí.	Other Bihárí dialects.	
Nom.	—	—	—	
Acc.	कि, किँ	कि, किँ	—	
Instr.	एँ, एँ	एँ	एँ*	* In South-Bhagulpúrí ऐ, *e.g.* भूखे मरै छी, 'I die of hunger.' In Purniyá, the form is एँ, भूखें मरै छी. In western Bhojpúrí it is खन, हम भूखन मरोला.
	कि, किँ	कि, किँ		
		ऊँ		
Dat.	कि, किँ			
		ऊ	—	
Abl.	कि, कि	कि	—	
		ऊ, ऊँ		
Gen.	कि, किँ			
		ऊ	—	
	र, सु	र, सु, ष		
Loc.	ए	ए	ए	
	कि, किँ	कि, किँ		
	ऊ, ऊँ	ऊ, ऊँ		

* I adopt the terms weak, strong, short, long, and redundant, from Hoernle's Gaudian Grammar. §§ 201, 356.

The following are examples of the above terminations :

A.—Baiswárí.

Acc. हि,—तब ब्रह्मा धरनिहि समुझावा, 'then Brahmá advised the earth'. *Rám. Bá. ch.* 199, 9.

हिं,—रामहिं प्रेम समेत लखि सखिन समीप बुलाइ, 'beholding Rám with affection she called near her friends.' *Rám. Bá. do.* 265, 1.

Instr. हि,—रघुपति सैनहि लखन निवारे, 'Rám warned Lakhan with a sign.' *Rám. Bá. ch.* 284, 8.

हिं,—प्रभु आदरहिं प्रेम पहिचानी पूछहिं कुसल, 'the Lord, sensible of their affection, asked their welfare with politeness.' *Rám. A. ch.* 25, 2.

ऐं,—पाछें अनहित मन कुटिलाई, 'Behind one's back an enemy in the viciousness of his soul.' *Rám. Kis. ch.* 7, 7, where पाछें is in the instrumental case, much like the Hindí पीछे से, which means both 'behind' (*instr.*) and 'from behind' (*abl.*).

एं,—जल हिमउपल बिलग नहिं जैसें, 'as water is not different from crystallized ice.' *Rám. Bá. ch.* 123, 11.

Dat. हि—सब रीति प्रीति समेत करि सो ब्याहि बिप भरतहि दयो, 'after affectionately performing every rite, the king gave (her) in marriage to Bharat.' *Rám. Bá. chh.* 49, 4.

हिं,—बहु बिधि चेरिहिं आदर देइ, 'in many ways he shows honour to the bondmaid.' *Rám. A. ch.* 24, 4.

Abl. हि,—गुरहि पूछि करि कुलबिधि राजा, 'the king having inquired from the guru, performed the family rites.' *Rám. Bá. ch.* 319, 8.

हिं,—मातुहिं पितहिं उरिन भये नीके, 'from your mother and your father you have well become debt-absolved.' *Rám. Bá. ch.* 284, 2.

Gen. हि,—बोलत लखनहि जनक डेराहीं, 'at the words of Lakhan, Janak became afraid.' *Rám. Bá. ch.* 286, 4.

हिं,—राजहिं तुम पर बड़ सनेहू, 'There is a great love of the king for you.' *Rám. A. ch.* 40, 6.

सु,—*only used with pronouns* (*omitting* 1*st and* 2*nd personal pronouns*) तासु निकट पुनि सब चलि आये, 'again, all approached hers.' *Rám. Kis. ch.* 25, 3.

र,—*only used with* 1*st and* 2*nd personal pronouns*, मैं अरु मोर तोर तैं माया, 'an illusion (arising) from egoism and from "mine" and "thine."' *Rám. Ar. ch.* 12, 2.

Loc. हि,—उबरा सो जनवाँसहि आवा, 'what remained over went into the guests' quarters.' *Rám. Bá. ch.* 332, 7.

भोरहि आजु नहाइ प्रयागा, 'at dawn to-day having bathed at Prayág.' *Ram. A. ch.* 262, 6.

हिं,—सब तरु फरे रामहित लागी, रितु अनरितुहिं कालगति त्यागी, 'to please Rám every tree was laden with fruit, whether in season or not in season, without regard to the time of year.' *Rám. Ln. ch.* 6, 5.

ञ,—हठ कीन्हे अन्तञ उर दाहू, 'if he persist in obstinacy, in the end it burns his bosom.' *Rám. Bá. ch.* 259, 5.

ञँ,—अन्तञँ कीच तहाँ जहँ पानी, 'where there is water, in the end there will be mud.' *Rám. A. ch.* 175, 4.

ए,—पाछे पवनतनय सिर नावा, 'afterwards the son of the wind bowed his head.' *Rám. Kis. ch.* 23, 9.

The terminations ऐं of the instrumental, and ञ, ञँ and ए of the locative are rare in the Rámáyan, and survive only in a few indeclinables like पाछैं, पाछे, अन्तञ, *&c.* There may be isolated instances of ञ and ञँ being used to form other cases, but I have not noted them in the course of my reading.

Probably the Baiswárí case postpositions सैं, तैं, मैं, and others are also instrumentals, *cf. post* Maithilí जैं, एँ, and तैं.

NOTE. It is better to consider this form in ऐं as an instrumental, and not as a locative, as (1) the locative is already supplied with another organic termination and (2) comparison with the Maithilí dialect shows the termination as exclusively used in the instrumental case in that dialect, and (3) other dialects such as Panjábí and Maráṭhí show traces of the same tendency. *See post,* under head of derivation.

B.—*Maithilí.*

Acc. हि,—हमर से हित जे सचुहि आन, 'he is my friend who brings my enemy.' *Man'bodh,* 6, 39.

हिं,—खेत महिसी चर, पड़वहिं मार, 'the buffalos are grazing in the field, beat the calves.' *Prov.*

Instr. हि,—बान्ह बान सभ फोड़ल बलहि, 'he opened the bonds and fetters with violence.' *Man.* 4, 42.

हिं,—अचरहिं झारि झुरि दितऊँ, 'I would have swept it with my body-cloth,' *Nág Songs, No.* 1.

ञँ,—अधरञँ आध सेहो दुरि गेला, '(as much as I would say) with half my lip, that also is gone far away,' *Vid.* 73, 4.

Instr. ऍ,—कमर बाँधे छुरिऍ काटारे, 'he binds his waist with knife and dagger,' *Mars.* 4, 1.

This example is Musalmáni-Maithilí, and the words may be nom. plurals fem. borrowed from Urdú. I shall hence give other examples.

गोरि मागु गौरबें आन्हरि, a fair woman is blinded by pride. *Prov.*

मेरु हेरैमें जेहन धेनु गाफ, 'like a cow (distracted) by the losing of her calf,' *Man.* 3, 17.

To this must be added the very common colloquial forms ऍं 'by this,' जें, 'by which,' तें, 'by that' which occur in literature only in company with prepositions; and the illative conjunction तें, or तैं, 'therefore.' Examples of the first are,

ऍं परि रासक मण्डल भेल, 'in this way was the circle of the *rás*.' *Man.* 6, 5.

जें परि पहरु सुति गेल, 'in what way the guards had gone to sleep.' *Ib.*, 17.

The following are colloquial examples, not made to order.

ऍं, कथे ई भेल, 'for this reason (by this), it happened by conversation.'

जें काने सीमद्भागवत सुनल कोरान नहिं सुनि सकैबो, 'I cannot hear the Kurán by the ears, with which I have heard the *Srímad bhágavat*.'

अपने कें प्रसन्न देखलन्हि, तें सो एलाह, 'he saw you pleased, therefore he came.'

अपना मे ऐक्य नहिं रहल, तें विपत्ति परल, 'there was no unity amongst themselves, thence fell the adversity.'

कथें कथें झगड़ा भेल, 'by discussions a quarrel arose.'

Compare the following example of the instr. of को 'what?'

कथों हमरा चोर बनबैछो, 'why do you make me out a thief?'

Classical examples of the use of तें or तैं are the following:

तें नहिं करथि गरासे, 'therefore he does not eclipse it.' *Vid.* 14, 8.

तैं नहिं कमल सुखाई, 'therefore the lotus does not dry up.' *Vid.* 14, 6.

Dat. ऊ,—सबऊ जथोचित कैल परनाम, 'to all he made meet reverence.' *Man.* 9, 62.

Abl. हि,—नेन्दहि सिख चरबाहि चहोर, from boyhood cowherds learn cattle-tending. *Man.* 4, 12.

ऊ,—चौनऊ मनोरथ चोहने रहल, 'from that place their hopes remained equally (unsatisfied).' *Man.* 1, 8.

ऊँ,—किछु नहिँ ननऊँ भेल, 'nothing came to pass from there.' *Ib.* 7.

Gen. ऊ,—चकरुऊ चलऊक डौल, 'a means of the going of Akrúr.' *Man.* 7, 17.

ए,—*only used with pronouns* (omitting 1st and 2nd personal pronouns), जसु मन परम तरासे, 'whose mind trembles exceedingly,' *Vid.* 7, 5.

र,—*only used with* 1*st and* 2*nd personal pronouns*, नहिँ मोर देओर, 'he is not my brother-in-law,' *Vid.* 79, 7.

क,—*only used in the* 2*nd personal pronoun*, पाए परसल मातु तुअ पानी, 'my feet have touched thy water, O mother,' *Vid.* 78, 3.

Loc. हि,—जमुना हरदहि गेल ब्रजनाथ, 'into the Jamuná-pool went Kṛishṇ.' *Man.* 4, 18.

हिँ,—चदंकहिँ सिंदुर मेट गेल, 'in her astonishment, the vermilion was rubbed off,' *Vid.* 26, 4.

गदरी खेतहिँ सुखाएल, 'the *gadarí* has dried up in the fields.' *Famine song*, 12.

ऊ,—पहड़ऊ निपुन परम ब्रजनाथ, 'Kṛishṇ was extremely skilled in wrestling.' *Man.* 9, 30.

ऊँ,—कोपऊँ कटु नहिँ भाखथि कबऊ, 'even at any time he spake not harshly in anger.' *Man.* 7, 35.

ए,—आएब चोघट घाटे, 'I shall go on an unfrequented river bank,' *Vid.* 5, 3.

This form of locative is very common in all Bihárí dialects in phrases such as घरे घरे, 'in every house,' &c.

From the above we are justified in drawing up the following model paradigm of the organic declension of the word घोड़, the weak form of घोड़ा, 'a horse,' in the singular number.

	Baiswárí of Rámáyan.	North Maithilí.	Other Bihárí dialects.
Nom. ...	घोड़,	घोड़,	घोड़,
Acc. ...	घोड़हि, घोड़हिँ,	घोड़हि, घोड़हिँ,	Wanting
Instr. ...	*घोड़ेँ, *घोड़ैँ, घोड़हि, घोड़हिँ,	घोड़ेँ, घोड़हि, घोड़हिँ, घोड़ञ,	घोड़ेँ, घोड़न,
Dat. ...	घोड़हि, घोड़हिँ,	घोड़ञ,	Wanting
Abl. ...	घोड़हि, घोड़हिँ,	घोड़हि, घोड़ञ, घोड़ञँ,	Wanting
Gen. ...	घोड़हि, घोड़हिँ, (तोर, जाहु),	घोड़ञ, (तुअ, तोर, जहु)	Wanting
Loc. ...	*घोड़े, घोड़हि, घोड़हिँ, घोड़ञ, घोड़ञँ,	घोड़े घोड़हि, घोड़हिँ, घोड़ञ, घोड़ञँ,	घोड़े.

Note as to Plural. The above is the singular declension. In the Rámáyan the terminations in हिँ are used in a plural sense; thus, सगुनहिँ अगुनहिँ नहिँ कछु भेदा, 'there is no difference between things possessing qualities, and those without them,' *Rám. Bá. ch.* 123, 1: native paṇḍits, indeed, maintain that the termination हिँ is properly only used in the plural, and that when used in the singular, it is always in an honorific sense. This theory is generally borne out so far as my experience goes, and hence it will be convenient to assume that in the Rámáyan the terminations हि, ऐँ, ऐँ, and ए are singular, and the termination हिँ plural.

In Maithilí, the termination हिँ and ञँ are used equally in a singular and in a plural sense. An example of the plural usage of हिँ will be found in the example given for the Locative.

The termination ए of the Instrumental is used only in the singular of nouns. Of Pronouns the case is different, *vide post.* Maithilí nouns always form their plural periphrastically by adding a noun of multitude, which is

itself declined in the singular, taking the singular terminations. The only words which take a new base in the plural (both for the nominative, and oblique cases) are the words समनि, सबहि, and लोकनि, (see Mth. Gram. § 25 for the two last) which form their instrumentals समनिएँ, सबहिएँ, and लोकनिएँ. I am unable to give any examples from literature of the use of these three words.

For further remarks concerning these plural forms in नि, *vide post.*

Derivation.

At present I do not propose to consider the genitive terminations क, र, and क, as they are only used in connection with pronouns, and can be more conveniently discussed under that head.

The remaining terminations are

Rámáyan,	हि,	हिँ,	ऊ,	ऊँ,	ऐं,	एँ,	ए,
Maithilí,	हि,	हिँ,	ऊ,	ऊँ,	—	एँ,	ए.

Before proceeding further, I must warn against another set of terminations in use in these dialects, which are merely particles of emphasis, *viz.*, हि, हिँ, हौ or हौं, ऊ or ऊँ, see Hoernle, G. G., § 550, and the Author's Mth. Gram., § 205. These are entirely different in origin, but are liable to lead to confusion.

The following table shows the declensional terminations in Apabhraṃśa Prákṛit. H. C. means the fourth book of Hemachandra's Grammar. K. I. means Kramadíśvara quoted in Lassen, pp. 449 and ff. Md. means Márkaṇḍeya quoted by Hoernle.

Table showing the declensional terminations of nouns in Apabhraṃśa Prákṛit.

	Singular.			
	Terminations common to all masculine and neuter nouns.	Terminations peculiar to अ bases, masc. and neut.	Terminations peculiar to इ and उ bases.	Feminine terminations for all nouns.
Nom.	—(H. C. 344), ओ (Mḍ.), उं (only in neuter nouns in क, (H. C. 354)).	ड़ु (H. C. 331), डो (masc., H. C. 332).	None.	—(H. C. 344).
Acc.	Same as Nom.	Same as Nom.	None.	—H. C. 344).
Instr.	ं (Mḍ.)	ड़ें (H. C. 333, 342, K. I. 24), डेण (Lass. p. 461).	ं, ण, ' (H. C. 343), णा (K. I. 25)	ए (with shortening of penult. vowel, H. C. 349, K. I. 38), ें (without shortening Mḍ.)
Abl.	हे (H. C. 336, 341, K. I. 29, 36, Md.), हो (Mḍ. and K. I. 34).	ड़ (H. C. 336).	None.	हे (with shortening of penult. H. C. 350, K. I. 35), हो, हे (without shortening, Mḍ.).
Gen.	—(H. C. 345), हो (K. I. 30, 34).	ड़ु, ड़, हो (H. C. 338) ड़, ड़ु (K. I. 30).	हे (K. I. 36).	हे (with shortening of penult. H. C. 350, K. I. 35).
Loc.	ि (K. I. 26).	डि, डे (H. C. 334, K. I. 27).	ि (H. C. 341).	ि (with shortening of penult. H. C. 352).
Voc.				हे (Mḍ.)

Table showing the declensional terminations of nouns in Apabhraṃśa Prákṛit.

	Plural.				Remarks.
	Terminations common to all masc. and neut. nouns.	Terminations peculiar to अ bases, masc. and neut.	Terminations peculiar to इ and उ bases.	Feminine terminations.	
Nom.	—(H. C. 344), हे (Md.), इं (only neut., H. C. 353, with optional lengthening of penult., Md.).	None.	None.	उ, ओ (H. C. 348) हे (Md.).	The sign — means that no termination is added to the base.
Acc.	Same as Nom.	None.	None.	Same as Nom.	
Instr.	हिं (H. C. 347).	डेहिं (H. C. 335).	None.	हिं (H. C. 347)	The letter ड is only a sign showing the elision of the final vowel of the base, and does not form part of the termination.
Abl.	हुं (H. C. 337, 341, Md.), हुं (Md.).	हुं (K. I. 28).	हुं (K. I. 33).	हु (H. C. 351)	Long vowels may be shortened, and short vowels lengthened in any of the terminations (H. C. 330).
Gen.	—(H. C. 345), हं (Md., H. C. 339, 340, K. I. 31), हुं (Md.).	None.	हुं (H. C. 340). हं (K. I. 32).		
Loc.	हिं (H. C. 347), हुं (H. C. 340), हं (Md.).	None.	None.	हिं (H. C. 347)	
Voc.	हो (H. C. 346).	None.	None.	हो (H. C. 346)	

With shortening of penult. vowel.

The casual terminations of the Rámáyan have been discussed by Hoernle (G. G. pp. 195—212). The results arrived at are as follows: With the exception of ऐं, which may be considered as a strengthened form of ईं, all the above forms are found in Apabhraṃśa Prákṛit. Taking each form separately we find;

A. With regard to हि, that it is used in the following cases:—

Ap. Prákṛit. (हे or हि)	Rámáyan.	Maithilí.
——	Accusative.	Accusative.
——	Instrumental.	Instrumental.
——	Dative.	——
Ablative. (हे)	Ablative.	Ablative.
Genitive. (हे)	Genitive.	——
Locative. (हि)	Locative.	Locative.

See Hoernle G. G., §§ 365 and 367. As regards the Prákṛit form हि, it is a weakened form of हे, which is properly a termination of the genitive singular, and has been extended to the abl. and loc. in Prákṛit, and further extended to the acc. instr. and dat. in the Rámáyan. In Maithilí, it has altogether lost its genitival sense, and is not used in the dative, as in the Rámáyan. This termination हि is derived from the Sanskṛit termination स्य of the genitive. So that we get the series Skr. घोटस्य, Ap. Pr. घोडहे, Bihárí घोड़हि, 'of a horse.' It will be seen that the termination हि in Bihárí, being added to the weak form of the noun, presupposes a Skr. घोटस्य, and not घोटकस्य, which latter would become Ap. Pr, घोडअहे, and Bihárí घोड़ाहि.

Other examples are *Skr.* मुनि, 'a sage,' *gen. sing.* मुनेः (for मुनिस्य), *Ap. Pr.* मुनिहे, मुनिहि, *Bihárí*, मुनिहि: and *Skr.* गुरु 'a teacher,' *gen. sing* गुरोः (for गुरुस्य), *Ap. Pr.* गुरुहे, गुरुहि, *Bihárí*, गुरुहि.

It is not necessary to give examples of Skr. strong forms in क for our present purposes,—for the termination हि is, in Bihárí, only added to the weak form of nouns.

B. हिं, is used in the Rámáyan only in a plural sense. In Maithilí it has (to a great extent in use) superseded हि, and is used in the sense both of singular and plural in the following cases:—

Ap. Pr. (हिं or हिं)	Rámáyan.	Maithilí.
——	Acc. plur.*	Acc. sing. and plur.
Instr. plur. (हिं)*	Instr. plur.*	Instr. sing. and plur.
——	Dat. plur.*	——
——	Abl. plur.*	——
Gen. plur. (हं)*	Gen. plur.*	——
Loc. sing. plur. (हिं)*	Loc. plur.*	Loc. sing. and plur.

* Used also sometimes in singular, *vide* Hoernle, p. 208.

See Hoernle §§ 367 and 369. As regards the Prákṛit form, two derivations are plausible. One connects it with the Prákṛit abl. plur. suffix हिंतो, and the other with Skr. abl. dual termination भ्यां (see Hoernle *l. c.*), which would regularly change in Pr. to हिं or हिं.

The following examples will show the process. Skr. *घोट, 'a horse:' abl. dual, *घोटाभ्यां; or Pr. abl. plur. (Ársha) घोडेहिंतो; Ap. Pr. gen. plur. घोडहँ: Bihárí घोड़हिं:

Skr. मुनि, 'a sage;' abl. dual, मुनिभ्यां; or Pr. abl. plur. (Ársha) मुनिहिंतो; Ap. Pr. gen. plur. मुनिहँ; Bihárí, मुनिहिं.

Skr. गुरु, 'a teacher;' abl. dual, गुरुभ्यां; or Pr. abl. plur. (Ársha) गुरुहिंतो; Ap. Pr. gen. plur. गुरुहँ; Bihárí गुरुहिं.

It is possible that these two derivations are not incompatible with each other. It will be observed, that when the Skr. has a long vowel before भ्यां, Ársha Prákṛit has (and only then) a long vowel before हिंतो. It is possible therefore that the first three syllables of गुरुहिंतो, are directly connected with गुरुभ्यां, and that the syllable तो is an additional pleonastic ablatival suffix.

C. ङ. It is rarely used in the Rámáyan, and probably only in the locative. It is evidently a weakened form of the Ap. Prákṛit म्हि. Both ङ and म्हि occur in all masculine and neuter nouns having अ bases in Ap. Pr. Bases in इ and उ take only म्हि. Feminine bases use ङ as the termination of the abl. and gen. plur. (H. C. IV, 351). In Maithilí ङ is used in all genders and with all weak bases. The use of these two terminations is as follows:

Ap. Pr. (masc. and neut).		Maithilí.
अ bases.	इ and उ bases.	
Nom. (म्हि)	म्हि	———
Acc. (म्हि)	म्हि	———
———	———	———
———	———	Dat.
Abl. (ङ, म्हि)	म्हि	Abl.
Gen. (म्हि)	म्हि	Gen.
———	———	Loc.

The use of these terminations has therefore been extended in Maithilí to the locative and dative. The dative, it need hardly be pointed out does not occur in Prákṛit. The origin of म्हि is obscure. Lassen, (p. 462) identifies it with an assumed Skr. suffix स्व; while Hoernle (§ 368) connects it with the Skr. abl. plur. suffix भ्यस, through भ्भो.

D. ऊँ. It is rarely used in the Rámáyan, and probably only in the locative. In Ap. Prákṛit, and Maithilí it is used as follows:

Ap. Prákṛit.	Maithilí.
———	———
———	———
———	Instr. sing. and plur.
———	———
Abl. plur. (ऊं)	Abl. sing. and plur.
Gen. plur. (ऊं)	———
Loc. plur. (ऊं)	Loc. sing. and plur.

See Hoernle, §§ 367, 369.

This termination is probably a weakened form of the Prákṛit abl. pl. suffix सुंतो. The derivation of सुंतो is obscure. From the analogy of च्हिंतो, we might expect it to be a compound of सुं + तो (Lassen, p. 310): सुं is the Prákṛit termination of the locative plural, and it may be noted that whatever vowel precedes the termination सुं in Prákṛit declension, the same vowel precedes सुंतो.

Thus, Prákṛit,—

Nom. Singular.	Loc. plural.	Abl. plural.
देवो	देवेसुं	देवेसुंतो
गंगा	गंगासुं	गंगासुंतो
अग्गी	अग्गीसुं	अग्गीसुंतो
बुद्धी	बुद्धीसुं	बुद्धीसुंतो

The termination सुं occurs in Ársha Prákṛit, but not सुंतो, which tends also to show that the latter is a later, and may be a compound form.

One example of this form will suffice. Skr. मुनि a sage; loc. plur. मुनिषु; Ársha Prákṛit, मुनिसुं: Prákṛit, मुनीसुं: Pr. abl. plur. मुनीसुंतो; Ap. Pr. gen. plur. मुनिऊं: Bihárí instr. plur. मुनिऊँ.

Note in the above that it is only in classical Prákṛit that the final vowel of मुनि is lengthened. We have Ársha, मुनिसुं, and Ap. मुनिऊं, so that we are justified in assuming an intermediate form मुनिसुंतो.

It is easier to derive मुनिऊं from मुनिसुंतो rather than from मुनिसुं directly; as it is more natural to derive the genitive from the ablative than from the locative. As regards the formation of an ablative by the

addition of an ablative sign to a locative, this is of common occurrence in Gaudian languages. It is quite usual to hear phrases such as घोड़े पर से गिर पड़ा, which is, literally, 'he fell from on the horse,' and which means in English, 'he fell from,' or, 'off the horse.'

E. ँ, ें,—the latter of these I consider to be simply a lengthened form of the former: and with this remark it will be sufficient to dismiss it. With regard to ए, the case is different, and will require more elaborate treatment.

ँ is used in the following cases:

Ap. Pr.	Rámáyan.	Maithilí.
Instr. (एं)	Instr.	Instr.

It will be seen that this case is used throughout all dialects as an instrumental termination,—and so also in Panjábí (seldom), *e. g.*, in the word भावें (*Skr.* भावेन) 'indeed,' 'truly;' *hence* 'although;' and in Maráṭhí, *e. g.*, घरें, 'by a house.' In western Bhojpurí it takes the fŏrm अन; thus, डरन, 'by fear,' भूखन, 'by hunger.'

In Ap. Pr., according to Mḍ., the termination is added directly to the base of the noun, whatever it is; so that we have वणएं, 'by a forest,' from वण, वाल्लाएं 'by a girl,' from वाल्ला, अग्गिएं 'by fire,' from अग्गि (nom. अग्गी), वाउएं 'by wind,' from वाउ, (nom. वाऊ). (Examples taken from Mḍ. *apud* Hoernle, § 367.) It will be observed that when the nom. sing. ends in long आ, it is unchanged, but when in long ई, or long ऊ, the final vowel is shortened before एं. H. C. and K. I. do not give the termination to feminine nouns, and give वणें instead of वणएं. In other respects they agree with Mḍ. Mḍ.'s वणएं is probably for वणकें so that the three grammarians are at one, except with reference to feminine nouns.

Maithilí goes a step farther. It (Gram. § 19) substitutes the ँ for the final vowel in all nouns whose direct forms end in अ or आ, so that we have फलें, 'by fruit,' from फल, कथें, 'by a story' from कथा, or to use the same examples as are given for Prákṛit, it has बनें for Pr. वणएं, and बालें for Pr. वाल्लाएं.

With regard to nouns ending in other vowels, it follows the Prákṛit rule. The ँ is simply added, and the final vowel, if long is shortened,—

D. ॐ. It is rarely used in the Rámáyan, and probably only in the locative. In Ap. Prákṛit, and Maithilí it is used as follows:

Ap. Prákṛit.	Maithilí.
———	———
———	———
———	Instr. sing. and plur.
———	———
Abl. plur. (ॐ)	Abl. sing. and plur.
Gen. plur. (ॐ)	———
Loc. plur. (ॐ)	Loc. sing. and plur.

See Hoernle, §§ 367, 369.

This termination is probably a weakened form of the Prákṛit abl. pl. suffix सुंतो. The derivation of सुंतो is obscure. From the analogy of च्चिंतो, we might expect it to be a compound of सुं + तो (Lassen, p. 310): सुं is the Prákṛit termination of the locative plural, and it may be noted that whatever vowel precedes the termination सुं in Prákṛit declension, the same vowel precedes सुंतो.

Thus, Prákṛit,—

*Nom. Singular.	Loc. plural.	Abl. plural.
देवो	देवेसुं	देवेसुंतो
गंगा	गंगासुं	गंगासुंतो
अग्गी	अग्गीसुं	अग्गीसुंतो
वुद्धी	वुद्धीसुं	वुद्धीसुंतो

The termination सुं occurs in Arsha Prákṛit, but not सुंतो, which tends also to show that the latter is a later, and may be a compound form.

One example of this form will suffice. Skr. मुनि a sage; loc. plur. मुनिषु; Arsha Prákṛit, मुनिसुं: Prákṛit, मुणीसुं: Pr. abl. plur. मुणीसुंतो; Ap. Pr. gen. plur. मुणिञ्चं: Bihárí instr. plur. मुनिञ्चं.

Note in the above that it is only in classical Prákṛit that the final vowel of मुनि is lengthened. We have Arsha, मुनिसुं, and Ap. मुनिञ्चं, so that we are justified in assuming an intermediate form मुनिसुंतो.

It is easier to derive मुनिञ्चं from मुनिसुंतो rather than from मुनिसुं directly; as it is more natural to derive the genitive from the ablative than from the locative. As regards the formation of an ablative by the

addition of an ablative sign to a locative, this is of common occurrence in Gaudian languages. It is quite usual to hear phrases such as घोड़े पर से गिर पड़ा, which is, literally, 'he fell from on the horse,' and which means in English, 'he fell from,' or, 'off the horse.'

E. ऍ, ऐं,—the latter of these I consider to be simply a lengthened form of the former: and with this remark it will be sufficient to dismiss it. With regard to ए, the case is different, and will require more elaborate treatment.

ऍ is used in the following cases:

Ap. Pr.	Rámáyan.	Maithilí.
Instr. (एं)	Instr.	Instr.

It will be seen that this case is used throughout all dialects as an instrumental termination,—and so also in Panjábí (seldom), *e. g.*, in the word भावें (*Skr.* भावेन) 'indeed,' 'truly;' *hence* 'although;' and in Maráṭhí, *e. g.*, घरें, 'by a house.' In western Bhojpurí it takes the fŏrm अन; thus, डरन, 'by fear,' भूखन, 'by hunger.'

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With regard to nouns ending in other vowels, it follows the Prákṛit rule. The ऍ is simply added, and the final vowel, if long is shortened,—

so that we have बेटिएँ 'by a daughter,' from बेटी. With regard to the Pr. examples, the nominatives both end in short vowels in Maithilí; आगि, 'fire,' makes अगिएँ, and बाउ 'wind,' makes बउएँ, or बोएँ.*

Finally the forms एँ, जेँ, तेँ in Maithilí referred to above must be again noted here, as important, and pointing clearly to the derivation. The only remaining cognate form is the word कथीँ, used colloquially as the instrumental of the oblique form, कथी, of the neuter interrogative pronoun की, 'what,' (see Mth. Chr. Voc. *s. v.* की),

As to the derivation of these forms, they may possibly come from the Skr. instrumental in न, which exists in अ bases in the form एन (अग्निेन). The forms which most plainly show their origin are the pronominal ones, एँ, जेँ, and तेँ. It must be noted that these are not formed from the oblique bases of their respective pronouns, which are एहि (or एतद्), जहि (or जाद्), and तहि (or ताद्) respectively (Mth. Gram. §§ 71, 76, 78), but stand completely apart from the declension of these pronouns as isolated forms. The nominatives of these pronouns are ई, जे, and से, so that in one of these cases at least it has not been formed by nasalizing that case. It is hence most rational to derive them through missing Prákṛit forms from Sanskrit एन (Vaidik), 'by this,' येन, 'by which,' and तेन, 'by that.' It must be noted also that while the proximate demonstrative in Maithilí ई, 'this,' has an instrumental form एँ, the remote demonstrative ओ, 'that,' has no such corresponding form, (see Mth. Gr. § 70, addenda). Similarly the Skr. proximate demonstrative pronominal base अ, has no remote demonstrative form. Classical Skr. has अनेन instead of the simpler Vaidik instrumental form एन, 'by this'; for an example of the latter, see R. V. I, 173, 9, एन, which the Vedártha Yatna translates अनेन.

As regards the form कथीँ, the termination may be referred to the Skr. instrumental termination इना, (अग्निना), Pr. इण (अग्गिणा), but the derivation of the stem is involved in much obscurity.

Having thus shown that these pronominal forms एँ, जेँ, and तेँ are most probably connected with the Skr. instrumental, it remains to consider the nominal forms. With regard to अ bases, the same reasoning applies, and घोड़ेँ* bears exactly the same relation to घोटेन, that एँ does to एन. With regard to feminine bases ending in आ, the case is different. In it the Skr. instr. ends in अया, from which I would derive the Prákṛit termination आए. The lengthening of the penult. in Pr. is probably due to the force of analogy, all the other cases in Sanskrit, except the vocative having a long penultimate. The termination एँ cannot of course be attributed to this

* With regard to the shortening of the Antepenultimate, see Mth. Gr. § 5, addenda. I have written the words as they are pronounced, and not as they are usually written.

form, and I refer it to the well known tendency of Prákṛit to reduce all nouns to one common declension, which is carried further by Ap. Pr. and the modern Vernaculars, than we find in the classical Prákṛit of Vararuchi.

By a similar process I would account for the instrumental forms of bases with other vocalic endings.

E. ए. This is the most universally distributed of all the case terminations. It occurs in all the Bihárí dialects, and in the Rámáyan. It appears in all the Prákṛit dialects from the classical of Vararuchi to the Apabhraṃśa; and, to take examples of cognate modern languages it is found in Bangálí, and in all the local dialects of Hindí. It also occurs in Sanskrit as the locative of nouns whose bases end in अ. In the modern languages, too, it is only used with nouns ending in a final (silent) अ. Thus we have घाटे 'on a landing place,' from घाट, गामे 'in a village, from गाम, but no corresponding forms for words like कथा, or पानि. Similarly also in Bangálí बालक, 'a boy,' makes बालके, but the locative of घोड़ी 'a mare,' is quite a different form, घोड़ीते. It is the same in classical Prákṛit, Árṣha, and Páli; in all these ए is only used as the termination of the locative of अ bases. We thus get the following table:

Sanskrit.	Páli.	Árṣha.	Prákṛit.	Bihárí.	Bangálí.
अ base					
देवे	देवे	देवे	देवे	देवे	देवे
but					
आ base					
गंगायां	गंगाय	गंगाए	गंगाए	गंगा म	गंगाय
इ base					
अग्नौ	अग्गिम्हि	अग्गिम्मि	अग्गिम्मि	आगि मँ	अग्निते
उ base					
गुरौ	गुरुम्हि	गुरुम्मि	गुरुम्मि	गुरु मँ	गुरुते.

From the above it is evident that the locative termination ए is used throughout all these languages only with bases in अ. Feminine bases in आ are no exception to this rule, for the termination ए in Árṣha and Prákṛit is of entirely different origin. In Apabhraṃśa Prákṛit there are two forms of the locative one in ए (तले), and one a weakened form in इ (तलि), both of which are used only with bases in अ. The latter it appears to me not unreasonable to consider to be a weakened form of the former.

It therefore appears possible that this Bihárí locative in ए is the Skr. and classical Prákṛit loc. suffix ए, which has been preserved unchanged. The fact that it has remained unchanged in the modern languages need not surprise us: for it has admittedly remained unchanged in the classical Prákṛits, while all the other case suffixes have changed in them. If therefore the locative has retained vitality so far, it need not astonish us that it has retained it to the last.

Note on the above. It will be seen that in these derivations of एँ and ए, I have given an etymology different from that put forward by so high an authority as Dr. Hoernle in his Gauḍian Grammar, §§ 367 and following. Dr. Hoernle considers एँ as a contraction of अहिं, and ए as a contraction of अहि respectively, terminations which have already been discussed and disposed of. This derivation is also plausible, but I venture to think that an equal amount of plausibility attaches to the derivation given above, on the following grounds.

Lassen (p. 461) connects the termination एँ with Skr. term. एन, but Dr. Hoernle considers that this is untenable because Skr. एन cannot be added to feminine bases in आ. This point has been already discussed by me, and I need not repeat what I have said here,—but, admitting for the sake of argument that Lassen is wrong, Dr. Hoernle's theory is also open to objection. Dr. Hoernle takes the termination अहिं, and supposes an elision of ह, which gives अइं, which is contracted to एं; hence he gets the forms in Apabhraṃśa Prákṛit, वणएं, वालाएं, अग्गिएं, and वाउएं, which he derives from supposititious forms *वणअहिं, *वालाअहिं, *अग्गिअहिं, and *वाउअहि which he considers old genitives. It thus appears that the letter अ in the termination is absolutely necessary for the theory; only अहिं can be contracted to एं; if the termination ever takes the form इहिं, it must be contracted to ईं, and if it takes the form उहिं, it can only become उइं. It must be remembered that we are only dealing with weak bases, for in the modern languages, एँ is only added to weak bases, and never to strong ones;* and it remains to be seen what form अहिं takes with weak bases. Really, this termination is हिं and not अहिं, and the vowel अ is only the termination of the base,

* This may be denied; but the fact remains that some weak forms do undoubtedly take the termination एँ, *e. g.* बात 'a word,' instrumental बातेँ; so also एँ, जेँ, and तेँ, which are undoubtedly formed from a weak bases, and this is quite sufficient for my argument. If I can prove that a single weak form takes एँ in the instrumental, it does away with the argument that इएँ or उएँ can in all cases be derived from इअहिं, उअहिं. It may be noted here that in the Mágadhí dialect of Bihárí only masculine weak forms ending in a silent consonant take एँ, and ए; thus, from बल 'force', instr. बलेँ; but never पनिएँ, or बातेँ.

so that the weak forms of the old genitive plural, above quoted, would be बणहिं and not बणहँहिं, बाल्हाहिं and not बाल्हाँहिं, अग्गिहिं and not अग्गिँहिं बाउहिं and not बाउँहिं. Now, it is possible to derive बनें from बणहिं, but impossible to derive आगिएँ from अग्गिहिं. I know that it can be assumed that आगिएँ is derived from the strong form अग्गिँहिं, but it is equally easy to derive it from the instrumental (Prákṛit) अग्गिणा (or देवें from देवेण), and this last derivation has the following advantages:

(1) It accounts for the termination एँ in nouns which (like बात) are never used in modern languages in their strong, but always in their weak forms.

(2) It accounts for the fact that एँ is always (with one or two isolated exceptions) used in a singular sense, while the termination हिं is distinctly a plural one.

(3) It accounts for the western Bhojpúrí forms in अन, such as डरन, भूखन.

(4) It is simpler to derive the instrumental एँ from a Skr. instrumental, and the locative ए from a Skr. locative, than to take two terminations, for one case (the genitive), one singular, and the other plural, and to adopt one, for no very valid reason, as a locative singular, and the other as an instrumental singular.

Another argument of Dr. Hoernle's given in the foot note to p. 208 is as follows; 'this explains why the Maráṭhí instr. in एँ is seldom used except with the prepositions करून or कडून; for it is really a genitive or oblique form, and as such naturally takes a postposition. If it were, as commonly supposed, identical with the old Skr. instr. in एन, the addition of the postposition would be very superfluous and anomalous.' The addition of the postposition may be superfluous, but it is not, I think anomalous. In Maithilí the preposition बिना 'without' governs the instrumental, both in the form in एँ, and in its inorganic or periphrastic form.

Examples are,

(1.) Organic instrumental.

Famine song, 10.

बिना जलें जग किछु नहिं उपजल, 'without water nothing sprouted in the world.'

(2.) Periphrastic instrumental.

Sal. 3.

बिना पुरुष सैं कोना दिवस गमाएब, 'without a husband how can I pass my days?'

These examples taken together show that there is no idea of a genitive sense, but that there is a pure idea of an instrumental sense in जलें in the first example.

With regard to the locative termination ए, the arguments respecting

it are exactly the same, *mutatis mutandis*, as those regarding ँ, and I do not repeat them.

β. Inorganic Declension of nouns.

By Inorganic declension I mean that kind of periphrastic declension which is formed by postpositions added to a base whether inflected or not. In Bihárí the base undergoes regular inflection or preparation for the reception of postpositions. This occurs both in the singular and plural, each of which has a direct (or nominative) and an oblique form.

It will be convenient to deal with the question of number first. The following are the plural forms.

	Baiswári.	Banáras Bhojpúri.	Bhojpúri.	Maithil Bhojpúri.	North Maithili.	South Maithili.	Purniyá Maithili.	Bhágalpur Maithili.	Maithil Mágadhi.	Mágadhi.
(1) Weak forms, घोर, 'a horse,' *Direct Plural.*	घोर	घोर	घोर	घोर	घोर	घोर	घोड़	घोड़	घोड़	घोड़
			घोरन	घोरन					घोड़वनि	घोड़न
Oblique.	घोरन्हि									
	घोरन्ह		घोरन्ह		*deest.*					
			घोरनि		(लोकनि)	*deest.*	*deest.*	*deest.*	घोड़वनि	
	घोरन	घोरन	घोरन	घोरन						घोड़न
(2) Strong forms in आ, घोरा, 'a horse,' *Direct Plural.*	घोरे*	घोरा	घोरा	घोरा	घोरा	घोरा	घोड़ा	घोड़ा	घोड़ा	घोड़ा
Oblique.	*deest.*	*deest.*	*deest.*	*deest.*	*deest.*	*deest.*	*deest.*	*deest.*	*deest.*	*deest.*

In all these, the oblique forms of the weak form of the noun is always used.

Similarly all other nouns. Those ending in long vowels, always shorten them before the oblique terminations of the plural. In short, the plural terminations in न्हि &c. can only be added to the weak form of a noun, and even when the weak form is not used in the singular it can always be used in the plural before these terminations.

In certain dialects peculiar affixes are used, which can be added to all nouns, to form a plural. They are direct and oblique,

			म०				सौ, सिवौ	सन्हौ,		
							आर	आरहिन		

In addition to the above, various forms of the words सब, or सभ, 'all,' and लोग 'people,' can be used to form a periphrastic plural.

* Rám. A. Ch. 138, मगु चलहिं न घोरे, a form which Kellogg seems to have overlooked (Gram. p. 78).

Reference to the above will show that the oblique form of the plural has four terminations, *viz.*, ह, न, न्हि, नि: and these terminations are only added to the weak base of a noun. This is even the case when the noun is not used in the singular or in the nominative plural in the weak form. *E. g.*, (Banáras-Bhojpúrí) nom. sing. नाऊ (strong form), 'a barber'; nom. plur. नाऊ (strong form); and obl. plur. नाउन (weak form). It is commonly said that strong-forms shorten their termination before न in the oblique plural, but this is hardly the correct way of looking at the matter. The base घोड़न cannot be said to be formed from the base घोड़ा, for this would presuppose (as will be seen further on) a Skr. form घोटकानां, which would become in Prákṛit घोडआणं (see Hoernle, p. 211) (whence perhaps O. H. मद्दिलानं, द्रव्यान, cf. Hoernle, p. 195), *घोडअणहं, *घोडअणह, which would become in Bihárí घोड़वन or घोड़ान, and not घोड़न.

The only exception to this is the Maithil-Mágadhí sub-dialect, which forms the oblique plural on the base of the long form, which may be referred to the Prákṛit long form घोडआणहं above referred to.

These plural oblique forms are not used in Maithilí in the case of nouns, except in a few isolated words like सभनि, 'all,' and लोकनि 'people.' They are common, however, in Maithilí pronouns where the plural form has acquired a singular honorific sense,—thus, तनि 'him,' जनि, 'whom.'

Wherever these forms are used in the oblique plural, they can also be used in the sense of a direct plural, in most of the dialects. The oldest dialect (that of the Rámáyan) confines these forms principally to the oblique case, but not universally, as in the phrase जिन्ह मोहि मारा ते मैं मारे 'I have beaten those who have beaten me.'* Banárás Bhojpúrí follows the Rámáyan very closely in this particular, but the other dialects use the oblique form indifferently in the direct and oblique cases plural.

To sum up the results of the above, we find that in Bihárí the nominative plural can always† be the same as the nominative singular; and certain dialects also form an oblique plural in ह, न, न्हि, or नि, which is also in certain of these adopted by the nominative.

With regard to the periphrastic plural, the usual affixes are सभ 'all,' and लोग 'people.' Bhojpúrí, however, and the sub-dialects of Purniyá, and Bhagalpúr add the words

Bhojpúrí सब
Purniyá-Maithilí सौ, सिबो
Bhagalpúr-Maithilí सन्हो

* Kellogg (p. 224) adduces this verse as an example of the use of the case of the agent before a transitive verb. As, however, मैं which occurs in the same sentence also before a transitive verb is undoubtedly in the nominative (the oblique form being मोहि) it is more convenient to consider जिन्ह as an example of the oblique plural used in a nominative sense.

† The Rámáyan घोरे is very rare, and is probably a form borrowed from Hindí.

The first I believe to be a deroded form of सब, सभ, 'all,' through an intermediate form सह; सन्ही then appears naturally as its oblique plural, with a lengthening of the final vowel.

Similarly, I would connect सिवि, with the Maithil word सबहि 'all.' through an intermediate form सिवहि or सिविह, and then सौ easily appears as a contracted form of the same word.

In the Bihár districts bordering on Bangál a form आर or आरहिन is used to form a plural. A reference to the neighbouring Bangálí gives the word आर, meaning 'and', 'other.' This is derived from the Skr. अपर meaning 'other.' Its use in Purniyá and Bhagalpúr is best seen in the pronouns, where it is used with the oblique form of the genitive singular, thus हमरा आर 'others of me', 'we.' So also घोड़ा आर, घोड़ा आरहिन, 'horses.' आरहिन, I consider a plural of आर, through transposition from आरन्हि.

Affinities and derivation.

The derivation of the plural termination न्ह, न, न्हि, नि, is from the Skr. gen. plural in आनां, through Prákṛit आणं, *अणं, अण्हं (*cf.* पंचण्हं, 'of five'), (*cf.* Hoernle, pp. 202 and 211). The only difficulty in this derivation is the termination र् in न्हि and नि. This I believe to be inorganic, and is due either to the memory of the Skr. neuter nom. plur. in नि which led to confusion, or (more probably) to false analogy with the very common termination of the third person plural of the Bihárí verb in न्हि, which has quite a different origin, *viz.*, from the Skr. न्ति. *E. g.*, the 3rd plural past of the verb देख 'see,' is देखलन्हि, which is frequently written देखलन्ह देखलनि, or देखलन. Seeing therefore these three plural verbal terminations, false analogy would inevitably suggest the addition of the form घोरन्हि to the regular plural substantival forms घोरन्ह and घोरन. It may be noted here that there is also a Skr. nom. neut. plur. in न्ति (भगवन्ति), which may have lent its aid to the false analogy.

On the preparation of the base.

It is commonly said that in Bihárí the oblique form of nouns is the same as the direct. This, however, is not the fact, and I hope to be able to shew that a distinct oblique form of nouns and of possessive pronouns exists throughout all the dialects.

It will be convenient to consider first the Bhojpúrí affixes of the genitive. Hoernle (p. 220) gives the genitival affixes (amongst others) as के, oblique के. The latter termination in use in Banáras, is not, however, pure Bhojpúrí. It appears to me to be borrowed from Hindí and not to be a pure Bihárí form. The oblique form के is almost universal over the Hindí area, and is not used in any Bihárí dialect with which I am acquainted.

In the pure Bhojpúrí of western Bihár the forms are—

Direct, के or कें (sometimes written क), and *oblique*, का.

Examples are the following.

Direct, के——ई राजा कें मंदिर बाटे, 'this is the king's house.'

हम कन्स के चौंड़ी हईं, 'I am the maid-servant of king Kans.'

Direct, क——हर रंगक बात सुनल गइल, 'matters of every kind were heard.'

Indirect, का——कपटी का मारला कें कुछो दोख नाहीं, 'there is no sin in (*lit.* of) the slaying of a deceiver.'

पंडितन का घरे ढेर पोथी बाटे, 'there are many books in the paṇḍits' house.'

In Maithilí, also, there is a genitive in क (Mth. G. § 22). In the case of nouns this has lost all inflexion, but in pronouns we see the inflexions still remaining. *E. g.*, the Relative pronoun जे, obl. form plur. (used as an honorific singular) जनि (Mth. Gr. § 76) : hence, adding the sign of the genitive we get जनिक. This has an oblique form जनिका, used as a base of the other cases, but that it is really an oblique genitive is evident from the following example (*Vid.* 39, 2).

जनिका जन्म चोइत गेलऊँ, 'at whose birth I went,' in which जन्म is in the locative case, the postposition being poetically omitted.

Again the gen. honor. of ओ (Mth. Gr.) is ऊनक (ऊनिक), and its oblique form is ऊनका, as in (*Sal.* 1),

ऊनका कारन, 'for the sake of him', and (*Sal.* 21)

ऊनका पहरा में, 'in his watch.'

It must be noted, however, that the oblique form का is more rare in Maithilí than in Bhojpúrí, for it has disappeared altogether in nouns. There is, in fact, a distinct tendency in *theṭh* Maithilí to use, even in the case of pronouns, direct forms instead of oblique ones. *E. g.*, in *Sal.* 1 we have ऊनक कारन beside the more correct ऊनका कारन, and so we have (*Sal.* 10) ऊनक डाक सँ instead of the more correct ऊनका डाक सँ, 'from his cry.' The Song of Salhes is, it must be remembered, in very *theṭh* language ; that is to say, in the language of the lowest people, and is in one or two places absolutely incorrect.

A similar pronominal oblique genitive form in का may be noted in all the other Bihárí dialects, but, for want of a literature, it is difficult to give authoritative examples.

To sum up this part of the explication ; 1—Bihárí has a genitive postposition के or क, which has an oblique form का. This oblique form has in the eastern and southern dialects fallen into disuse in the case of substantives, but still survives everywhere in the pronouns.

The question of genitive postpositions naturally leads to possessive pronouns. The following are the possessive pronouns in Maithilí. As they will be treated of at length under their proper heading it is not necessary to give them for other dialects.

Pronoun.	*Possessive.*
मैं, 'I,'	मोर, 'my.'
हम, 'I,'	हमर, हमार, 'my.'
तौं, 'thou,'	तोर, 'thy.'
तोँइ, 'thou,'	तोइर, तोइार, 'thy.'
अपने, 'self' (*Sal.* 18)	अपन, अप्पन, 'own.'
ई, 'this,'	एकर, 'of this.'
ओ, 'that,'	ओकर, 'of that.'
जे, 'who,'	जकर, 'whose.'
से, 'that,'	तकर, 'of that.'
के, 'who?'	ककर, 'whose?'

The last five are not properly possessive pronouns, but are regular genitives formed by adding the genitive postposition कर, to the pronominal bases ए, ओ, ज, त, and क respectively. As, however, in their adoption of an oblique base they run exactly on all fours with the true possessive pronouns, it is convenient at present to consider them also as such.

All these possessives are used as genitives of the various corresponding pronouns, and are usually considered as such. Thus मोर is said to be the genitive of मैं, हमर of हम, अप्पन of अपने, and so on.

All these possessive pronouns have an oblique form, formed by shortening the antepenultimate or penultimate, and lengthening the final vowel to आ. Thus,

Possessive.	*Oblique.*
मोर,	मोरा.
हमर, हमार,	हमरा.
तोर,	तोरा.
तोइर, तोइार,	तोइरा.
अप्पन, अपन,	अपना.
एकर,	एकरा.
ओकर,	ओकरा.
जकर,	जकरा.
तकर,	तकरा.
ककर,	ककरा.

This oblique form is used for two purposes.

A, as a true oblique genitive.

B, as a declensional oblique base.

A, *as a true oblique genitive.*

Examples. हमरा घर मैं, 'in my house.' (*Sal.* 19).

अपना सिरकी मैं, 'in one's own hovel.' (*Sal.* 20).

अपना चढ़ेक घोड़ी, 'the mare of his own riding.' (*Sal.* 21).

Occasionally the direct form is used instead of the oblique, as (*Sal.* 17).

अपन इजतिक अकरार, 'a bond of my own chastity' (*ib.*).

It is difficult to give examples out of Vidyápati, as he frequently lengthens a final vowel for the sake of metre, which is misleading.

B, *as a declensional oblique base.*

The correlative pronouns have each two proper declensional bases,—1, a singular one, and 2, a plural one. In Maithilí the singular has in all cases acquired a non-honorific sense, and, in the case of ई, 'this,' ओ, 'that,' custom has further confined it to referring to inanimate objects only. (Mth. Gr. §§ 70, 72, 79, 85, and 86). The plural base has in all cases assumed a singular honorific sense. In addition to these bases (which appear under similar circumstances in all Bihárí dialects, *vide post*), the oblique form of the genitive is frequently used in the sense of another oblique declensional base. This is quite regular, for as will be seen later on, the postpositions attached to this base are all nouns either in the instrumental or locative case. Thus जकरा मँ, means 'in the middle of which,' (Mg. Pr. जस्स केरअस्स मज्झि, *Skr.* यस्य इतकस्य मध्ये) in which the Pr. केरअस्स in the genitive case is (as will be seen hereafter) the direct origin of the oblique form करा.* The following table shows the three oblique declensional forms of each of the pronouns in Maithilí.

Nom.	Proper oblique Singular.	Proper oblique Plural.	Periphrastic oblique base made from oblique Genitive.
मैं, 'I.'	मोहि.	*Wanting.*	मोरा.
हम, 'I.'	*Wanting.*	*Wanting, but Bhojpúrí* हमनी.	हमरा.
तों, 'thou.'	तोहि.	*Wanting.*	तोरा.
तोंहि, 'thou.'	*Wanting.*	*Wanting, but Bhojpúrí* तोहनी.	तोहरा.
अपने, 'self.'	*Wanting.*	*Wanting, but Bhojpúrí* अपनन.	अपना.
ई, 'this.'	एहि.	इन (इनि).	एकरा, इनका.
ओ, 'that.'	ओहि.	उन (उनि).	ओकरा, उनका.
जे, 'who.'	जाहि.	जनि.	जकरा, जनिका.
से, 'that.'	ताहि (*old* तेहि, *Vid.* 28, 4).	तनि.	तकरा, तनिका.
के, 'who.'	*काहि (Mth. Gr. § 79).	कनि.	ककरा, कनिका.

From the above it will be seen that both the oblique genitive singular and the oblique genitive plural form new periphrastic declensional bases, one singular, and the other plural.

As far as use goes, it may be noted that the proper oblique forms singular and plural of the correlative pronouns are generally used as adjectives, and the periphrastic ones are always used as substantives.

The following examples show the use of these forms.

A. *Proper oblique singular.*

Vid. 34, 2, मंद् बचन तोहि के न कहल अहि, 'hath any one used reproachful words to thee?'

Sal. 1, ताहि दिन लिखि देल(क), 'he wrote down that day,'

B. *Proper oblique plural.*

Bhojpúrí fables, 6, हमनी के लड़ावत फिरेले, 'he goes about causing us to fight.'

Sal. 1, ऊनि स्वामीक कारन, 'for the sake of that lord.'

C. *Periphrastic oblique singular.*

Vid. 55, 4, फेरि माँगब पऊ तोरा, 'in return I will ask for thee, my lord.'

Sal. 12, तकरा पार मति करह, 'do not pass him over.'

D. *Periphrastic oblique plural, or honorific.*

Mth. chr. p. 2, हमरा बेटा जेहन अहि, से खूब जनैछी, 'you know well what sort of son there is to me (*mihi filius qualis est*)', where हमरा is idiomatically used for the dative हमरा कें, and must not be confounded with the genitive हमर.

Sal. 13, तौ लागी ऊनका फुरसति नहिँ, 'till then there will not be leave to depart to him (*illi*).'

Sal. 19, हमरा सौं की लेबे चाहह इनाम, 'How wilt thou get a present from me.'

Under the last head, two examples have been given of a dative of possession. These forms which at first sight look like oblique forms of the genitive used in a direct sense, are thus explained by competent natives. This explanation is most reasonable, for there can be no doubt about हमरा बेटा being very different in meaning from हमर बेटा, and about ऊनका फुरसति being different in meaning from ऊनक फुरसति.

In conclusion I append here, a list of all the pronominal genitival forms which I have collected from the prose of the Maithil Chrestomathy. I have submitted them all to Bábú S'rí Náráyan Singh of Darbhangá, a gentleman who has an intimate acquaintance with the Maithili language, united to an intelligent knowledge of English. He has noted for me any optional form, when such case be used.

A. *direct genitives governed by a nominative.*

Sal. 7, तकर लिखिया केहन सुरखी, 'how beautiful the woman of that.'

Sal. 15, हमर सक नहिं थीकि, 'I have not the power.'
Sal. 16, केकर बेटा, 'whose son?'
Sal. 20, हमर रोज हरज होइत, 'my profession will be damaged.'

B. *direct genitives governed by an accusative in the form of the nominative.*

Sal. 5, ऊनक कानब सुनि, 'hearing whose weeping.'
Sal. 7, आकर बेदुली लाएल(ह), 'whose *beduli* you have brought.'
Sal. 8, लिअ अपन बेदुली, 'take your *beduli*.'
Sal. 16, तकर अकरार लिखि, 'having written a bond of that.'
Sal. 18, घर अप्पन जाह, 'go to your house.'
Sal. 20, लाबे गेल अप्पन भाई, 'he went to fetch his brother.'
Sal. 20, अप्पन मुदै बान्हू, 'bind your enemy.'

C. *direct genitives governed by a noun in an oblique case,*—rare, but permissible.

Sal. 1, ऊनक कारन, 'for the sake of him.'
Sal. 10, ऊनक डाक सँ, 'from his call.'
Sal. 17, अपन इजतिक, 'of (my) own chastity.'

According to Bábú S'rí Náráyaṇ Singh, the direct form is admissible, wherever the oblique form is usually employed, but not *vice versâ*. Thus the following pairs are equally correct.

	admissible.	*usual.*
(1)	ऊनक कारन	— ऊनका कारन
(2)	ऊनक डाक सँ	— ऊनका डाक सँ
(3)	ऊनक पहरा मे	— ऊनका पहरा मे
(4)	अप्पन इजतिक	— अपना इजतिक
(5)	अप्पन चढेक घोड़ा	— अपना चढेक घोड़ा

Where, however, the governing noun is in the nominative or in the accusative in the form of the nominative, the oblique form can never be used. The following therefore are wrong.

ऊनका कानब सुनि, तकरा अकरार लिखि, अपना मुदै बान्हू, हमरा रोज हरज होइत, ककरा बेटा अथि।

The phrase हमरा सक नहिं is, however, correct, but then हमरा is the dative of possession, 'to me there is no power.'

D. *Proper oblique genitives governed by nouns in oblique cases.*

Governed by,

Instr. Sal. 1, 2, 3, ऊनका कारन, 'for the sake of him' (*cf.* C.)
Gen. Sal. 21, अपना चढेक घोड़ा, 'the horse of his own riding,' 'his own riding horse.'

Loc. *Sal.* 5, जुमलीह अपना फुलवारी, 'she arrived at her own garden.'
ib. आइलि उनका फुलवाड़ी, (her companions) came to her garden.
Sal. 6, आनि अपना फुलवाड़ी, 'having brought him to your garden.'
Sal. 9, ऐलीह अपना फुलवाड़ी, 'she came to her garden.'
Sal. 11, उनका सिरमा में, 'at her bed-head.'
Sal. 16, हमरा पास, 'near me.'
Sal. 19, हमरा घर में, 'in my house.'
Sal. 19, तोहरा घर में, 'in thy house.'
Sal. 19, अपना सिरकी में, 'in my own hovel.'
Sal. 20, हमरा लग, 'near me.'
Sal. 10, 21, उनका पहरा में, 'in his beat.'

E. *Oblique genitives used as an oblique declensional base.*
Sal. 5, ककरा दिआ, 'having given whom?' 'through whom.'
Sal. 6, तोहरा छाड़ि, 'having abandoned thee,' 'except thee,'
Sal. 11, तकरा तजवीज करै, '(he began to) consider this,' (तजवीज करब is a compound verb.)
Sal. 12, तकरा पार मति करह, 'do not pass him over.'
Sal. 13, उनका कहबैन्हि, 'I would tell him.'
Sal. 13, तकरा दिआ, 'through him.'
Sal. 14, हमरा बाँधि देल अहि, 'you have tied me up.'
Sal. 17, हमरा बन्ध खोलौलिन्हि, 'you got me released.'
Sal. 19, तोहरा मन पुराएब, 'I will satisfy thee.'
Nág. songs, 4, हमरा रटना रटौलन्हि, 'he caused me to journey a journey.'
Instr. *Sal.* 16, तोहरा सँ विवाह करी, 'I may marry thee.'
Sal. 20, तकरा सभ सँ लड़ने, 'in fighting with all them.'
Dat. *Mth. Chr.* p. 1, उनिका माता नहिँ, 'he has no mother.'
ib. p. 2, हमरा बेटा जेहन अथि 'what sort of son I have,' *see above.*
Sal. 5, उनका माए बाप गारी देलक 'have her father and mother given her abuse?'
Sal. 13, उनका फुरसति नहिँ '(there will) not (be) leave to him to depart.'
Sal. 15, तोहरा फुरसति देबह, 'I will give you leave to depart.'
Sal. 15, तकरा जाय कहब, 'go to her and say.'
Sal. 19, से इनाम दह हमरा, 'give that to me as a reward.'
Sal. 19, तोरा इनाम दैत छी, 'I give you a reward.'
Famine song, 5, ककरा करब बखान, 'to whom shall I relate?'
Abl.
Sal. 19, हमरा सँ की लेबै, 'what will you take from me.'
Nág. Songs, 4, हमरा सँ भिखिआ मंगौलन्हि, 'he asked alms from me.'

Loc. *Sal.* 14, तोहरा अहैत, in your presence.'

Sal. 20, ता में, in the meantime.

Occasionally the oblique form ends in आँ; *e. g.* तन्हिकाँ पाछाँ धरनी, 'after him (went) the earth,' *Man.* 1, 12.

Having exhausted the question of the oblique form of the genitives of pronouns, it now remains to consider those of substantives.

First we shall take the following words, which, ending in न, ल, ड़, and र, offer examples of nouns with oblique forms exactly like those of pronominal genitives. There are doubtless many others, but these are those of which I am at present able to give proof by means of examples. They are—

आँगन, 'a courtyard,'	*oblique*	आँगना.
नैन, 'an eye,'	„	नैना.
पहिल, 'first,'	„	पहिला.
बड़, 'great,'	„	बड़ा.
दोसर, 'second,'	„	दोसरा.
तेसर, 'third,'	„	तेसरा.
पहर, पहरू, 'a watch,'	„	पहरा.
आँचर, आचर, 'a cloth,'	„	आँचरा, अचरा.
आन्हर, 'blind,'	„	आन्हरा.
इँगुर, 'vermilion,'	„	इँगुरा.
बहीर, 'deaf,'	„	बहिरा.
लिलार, 'the forehead,'	„	लिलरा.

To these may be added the following,

आगूँ, आगूँ, 'front,'	*oblique*	आगाँ, आगाँ, 'before.'
पछूँ, पाछूँ, 'rear,'	„	पछाँ, पाछाँ, 'behind.'
ठाँईं, 'place,'	„	ठाँयाँ, 'in a place.'

Examples are,—

Direct, आँगन सुन देखि, 'seeing the courtyard empty,' *Man.* 3, 15.

नयन (*i. e.*, नैन) नीरापूरल, 'her eyes filled with tears,' *ib.*

पहिल खण्ड हम लेब, 'I shall take the first portion,' *Fable*, 7.

बड़ (*dir.*) अनुरोध बड़ा (*obl.*) पय राख, 'lay (the burden of) great favours upon the great,' *Vid.* 3, 6.

दोसर रोये चन्ना, 'the second one who weeps is Channá,' *Mars.* 3, 2.

तीनिक तेसर, 'the third after three,' *Vid.* 9, 1.

जे परि पहर सुति गेल, 'how the watch went to sleep,' *Man.* 6, 17.

छाड़ कन्हैया मोर आचर, 'let go, O Krishn, my cloth,' *Vid.* 21, 3.

आन्हर कुकुर बसाते भूके, 'a blind dog barks at the wind,' *Prov.*

It is not necessary to give examples of other direct forms in र.

आगू (*or* आगूँ) थलथल, 'a pendulous front,' *Mth. Chr. Voc. s. v.* आगू.

पाछु (*or* पाछूँ) भारी, 'a heavy behind,' *ib. s. v.* पाछु.

I do not know of any authoritative example of ठाँढ़, but the word is common colloquially.

Oblique, कटगर तर अँगना केंथो राख, 'does any one keep a thorn tree in his courtyard,' *Man.* 2, 7.

नैना काजर पेन्हि लेलि, 'on her eyes she applied collyrium,' *Sal.* 18.

I do not know of any authoritative example of पहिला, but it is commonly used in conversation to mean, 'at first'.

An example of बड़ा has been given above.

तेसराक अन्त, 'the end of the third,' *Vid.* 60, 3.

सलहेसक पहरा सँ, 'from Salhes's watch,' *Sal.* 12.

अचरा डगरिया बहारितेँ, 'I would have swept the road with my cloth,' *Gorakhpúrí songs,* No. 12.

बहिराक सुतनहिँ की, आन्हराक जगनहिँ की, 'what does a deaf man lose by sleeping, or a blind man by waking,' *Prov.*

सिखरा सोभेला इँगुरा के रोरिया ना, 'on the forehead the fragments of red lead are beautiful,' *Gor. Sgs., No.* 1.

अगा पछा* बिदा भेल, 'they departed one behind the other,' *Sal.* 17.

बिचे डेंथाँ बरहो बिछोगवा, 'in the middle place, (write) the separation of twelve (months).' *Gor. Sgs. No.* 3.

Finally we come to the two verbal nouns in ब and ल, described in Mth. Gr. § 189. These two forms are current throughout all the dialects of Bihárí, as will be seen later on, and in nearly all these dialects, they have an oblique form as follows:

Banáras Bhojpúrí.

Direct.	*Oblique.*
देखब	देखबे.
देखल	देखले.

* The text has अगा पछा but अगाँ पछाँ would be more correct. There is a tendency in the *theth boli* to drop nasal sounds.

Bhojpúrí.

देखब (rare)	not used.
देखल	देखला.

Examples,

Direct, ऊ कहल करेला, 'he does speaking,' 'he speaks frequently.'

Oblique, पछतउला सें का होला, 'what comes from regretting?', where पछतउला is the oblique form of पछतावल. (*Fable* 15).

Maithilí-Bhojpúrí.

देखब, (rare)	not used,
देखल	देखला,

Examples,

Direct, ऊ कहल करइअ, 'he speaks frequently.'

Oblique, पछतौला से की हो सकइत छइ, 'what can come of regretting?' where पछतौला is oblique form of पछतावल.

Northern Maithilí.

देखब	देखबा.

Examples,

Direct, ऊनक कानब सुनि, 'hearing her cries,' (*Sal.* 5).

Oblique, पछतैबाक नहिं चाही, 'it is not proper to regret,' (*Fable* 15), where पछतैबाक is the genitive of पछताएब, (for पछतएबाक).

Occasionally the oblique form in this dialect ends in आँ; *e. g.*,

किछु कहबाँ लागु 'she began to say something,' *Man.* 1, 12.

देखल	देखला.

Direct, ओ कहल करैअहि, 'he speaks frequently.' (*Grammar*).

Oblique, दौड़धूप कैला सें किछु नहिं हैत, 'from fussing nothing will come to pass.' (*Fable* 14).

The verbal noun in ल has had an influence even on foreign words. Thus the Arabic word बदल, has an oblique form बदला, as in the sentence, एहि उपकारक बदला, 'in exchange for this benefit,' (*Fable* 15).

Southern Maithilí. *Purniyá Maithilí.*

Same as Northern Maithilí.

Bhagulpúrí-Maithilí has the oblique form of देखब, देखबे, but authoritative examples are wanting. It has for the oblique form of देखल, देखला or देखलऽ, according to locality.

In *Maithil-Mágadhí* the verbal noun in ब appears to have dropped out of use. The verbal noun in ल follows Northern Maithilí.

Finally, *Mágadhí* agrees with Maithilí.

We thus find that with the exception of a doubtful form in Bhagulpúr, and the extreme Western case of Banáras-Bhojpúrí, an oblique form of verbal nouns in ब and ल, ending in बा and ला obtains more or less currency.

In South Bhagulpúr this ला is weakened to लऽ, which it is important to note, as it gives the clue to the derivation of another set of oblique forms to be now noted.

In the *Maithilí of South Bhagulpúr* nouns ending in a silent consonant (that is to say weak forms in ॅ), vocalize that consonant in the oblique cases. Thus घर, 'a house,' Acc. घरऽ कैं. The same dialect has a feminine genitive affix केरी, the masculine of which is केरऽ, which leads one to presume that as in the same district देखलऽ is a weakened form of देखला, so also घरऽ is a weakened form of घरा.

In *Mágadhí* such nouns ending in a silent consonant (that is to say weak forms in ॅ) have an oblique form in ए: thus, घर, Obl. घरे. Mágadhí immediately adjoins the Maithilí of Bhagulpúr, and hence it is evident that this oblique form is weakened from घरा. The weakening of बा to ए is borne out by the old Maithilí accusative postposition कां, which has become in modern Maithilí कें, and the close connection between ए and ॅ is shown by the indeclinable participle of the root कर 'to do,' which is either कें (Mth. Gr. § 172) or कं (Vid. 66, 5).

This concludes the discussion concerning the different varieties of oblique forms in Bihárí which end in बा. To sum up, we may reduce what we have observed to the following.

In Bhojpúrí the affix of the genitive has an oblique form in बा, thus के, oblique का; and in all Bihárí dialects the pronouns have an oblique genitive in बा, thus एकर, एकरा. This oblique genitive is also used as a general oblique declensional base.

In Mágadhí, and a cognate sub-dialect, all nouns in the weak form have an oblique form in ए or ॅ, thus, घर, *oblique* घरे or घरऽ.

This oblique ए or ॅ is either a weakened form of or a form closely connected with the above oblique form in बा.

In the majority of Bihárí dialects, verbal nouns in ब and ल, have oblique forms in बा or बाँ, and so also there are cases of other and even foreign nouns in र, ड़, न, and ल which have similar oblique forms; also a few cases of nouns ending in ईं, and ऊँ.

[Note on some apparently irregular forms in the song of Salhes.

It must be remembered that this song is printed exactly as it was taken down from the mouth of a Ḍom. These Ḍoms are great wanderers, and hence besides the *theth* or vulgar forms (such as देल for देलक &c.) which abound in it, there are one or two forms which must be referred to other dialects, viz.

Sal. 7. तोहरे कारन, Banáras Bhojpúrí for तोहरा कारन. The form is never used in Maithilí.

Sal. 18. चिन्हले लोग अनचिन्ह भै गेल, if this means 'recognized people became unrecognized,' it must also be Banáras Bhojpúrí. It may, however, mean 'in recognition, people became unrecognized,' in which case चिन्हले is the regular locative of the verbal noun चिन्हल, 'recognition,' obl. चिन्हला, instr. चिन्हलें, loc. चिनले. Similarly in

Sal. 18. सुखले नदी पार भै जाएब, सुखले may be considered as locative of सुखल, and the sentence mean literally, 'in dryness I will cross the river.' The following also are locatives :—

Sal. 17, 18. असले, 'in reality.'

Sal. 7, 12, 14. सगले, 'at once.'

Sal. 12, पहिले. 'at first.'

Sal. 20. लड़ने, 'in fighting,' for लड़ले, न being frequently substituted for ल in *theth bolí:* as it is also done in the line immediately preceding where we have खेहारनें for खेहारलें, and in the very common and vulgar लेने or लेनें जाएब for लेलें जाएब, (*see gram.* § 197).

The only other form to be noted is the anomalous

Sal. 19. जाति के हम नटिन, 'by caste I am a gipsy,' where के is not a Maithilí, but a western form appropriate enough in the mouth of such a woman. Compare, however, *Sal.* 20, हम जातिक कसबीन].

Derivation.

We have already seen that the oblique plural in न or न्ह (नि or न्हि) is derived from the Sanskrit genitive plural; and by parity of reasoning we should be led to expect that the Bihárí oblique form singular in आ is derived from the Sanskrit genitive singular. It will now be shown that this is the fact.* It must be observed that these oblique forms are used (as far as we have hitherto investigated) only with nouns in the weak form. Thus, अनक, एकर, देखब, देखल, घर, are all weak forms. Strong nouns of the अ base in आ are commonly said to remain unchanged in the oblique cases, thus, घोड़ा, 'a horse,' obl. घोड़ा, but in reality as will also be now seen, the oblique form, though the same in appearance as the nominative, is of different derivation,—in short, just as घर (nominative) corresponds to Skr. गृहं, and घरा (old form of oblique घरअ) to Skr. गृहस्य; so घोड़ा (nominative) corresponds to Skr. घोटकः, and घोड़ा (oblique) to Skr. घोटकस्य. We thus come to the general rule that strong forms of अ bases always, and weak forms of अ bases frequently have an oblique form in आ.

* With regard to the following, see Hoernle, pp. 194, 195. I have, however, come to slightly different conclusions.

Let us take weak forms first :—

(1). Skr. nom. sing. गृहं 'a house;' gen. sing. गृहस्य; Mágadhí Pr. nom. sing. घरं, 'a house,' gen. sing. घरस्स, hence (घराह) घराह; hence, by elision of final ह, Bihárí oblique form, घरा.

(2). Skr. nom. sing. कर्त्तव्यं, 'what is to be done;' gen. sing. कर्त्तव्यस्य; Mg. Pr. nom. sing. करेअव्वं; gen. sing. करेअव्वस्स, करेअव्वाह; hence Bihárí nominative करब, 'what is to be done,' 'an action;' oblique करबा 'of an action:' Bihárí locative, करबा में = Mg. Pr. करेअव्वाह मज्झि; Skr. कर्त्तव्यस्य मध्ये.

(3). Skr. nom. sing. कृतं, 'a thing done;' gen. sing. कृतस्य; Mg. Pr. nom. sing. कलिदं (as if from Skr. करितं), gen. sing. कलिदस्स, कलिदाह; Árddha Mg. Pr. nom. sing. कलिअं; gen. sing. कलिआह; Bihárí nom. sing. कइल (कैल) 'an action,' loc. sing. कइला (कैला) में = Pr. कलिदस्स मज्झि = Skr. करितस्य (कृतस्य) मध्ये, 'in an action.'

One example of a strong form will suffice, Skr. nom. sing. घोटकः, 'a horse;' gen. sing. घोटकस्य; Mg. Pr. nom. sing. घोडओ, 'a horse,' gen. sing. घोडअस्स, घोडआह; Bihárí, nom. sing. घोड़ा, 'a horse,' oblique form, घोड़ा, loc. sing. घोड़ा में, = Mg. Pr. घोडआह मज्झि, = Skr. घोटकस्य मध्ये.

*Similarly the Bihárí oblique form in आँ, is really a plural, and is derived from the Sanskrit genitive plural, through the Mg. Pr. gen. plur. in आहँ (H. C. IV, 300), thus,—

Skr. nom. sing. *कथितव्यं (for कथयितव्यं), 'what is to be said;' gen. plur. *कथितव्यानां; Mg. Pr. nom. sing. कहिअव्वं; gen. plur. कहिअव्वाहँ; Ap. Pr. nom. sing. कहिव्वं (K. I. 50); gen. plur. कहिव्वहं; hence Bihárí nom. sing. कहब; obl. (with elision of ह and contraction of concurrent vowels) कहबाँ (for कहबअँ); loc. plur. कहबाँ में = Ap. Pr. कहिव्वहं मज्झि = Mg. Pr. कहिअव्वाहँ मज्झि = Skr. *कथितव्यानां मध्ये.

Note, it is difficult to derive the Bihárí oblique form from the Ap. Pr. gen. termination अड, for, though this would account for strong forms like घोड़ा (= घोड़अड by contraction of the two concurrent vowels), it will not account for weak forms like घरा, which would be in Ap. Pr. घरड, and not घरअड. But see contra Hoernle, pp. 194, 195.

Affinity.

One affinity must be noted here, the Bangálí so-called gerund in the genitive case in आर, *e. g.* देखिबार; that is to say देखिबा + र, just as in Bihárí we have देखबाक, देखबा + क;—र and क being respectively the signs of the genitive.

Other oblique forms.

There is another oblique form of the verbal noun which requires careful noting. We find it in the following forms :—

Baiswárí	देखै,
Banáras Bhojpúrí	देखै (? देखे).
Bhojpúrí	देखे.
Maithil Bhojpúrí	देखे.
North Maithilí	देखे, देखऽ, (Purniyá) देखे,
South Maithilí	देखे, देखे, देखऽ.
Maithil-Bangálí	देखे,
Maithil-Mágadhí	देखे, देखऽ,
Mágadhí	देखे.

These forms are all of them oblique, and are never used in the sense of the nominative. They are especially common in compound verbs, in the sense of the dative, *e. g.*, in the phrase घड़ी बाजे चहैकलि, "the clock wished for the act of striking," *i. e.*, "was about to strike," मारे लागल, "he became attached to beating," *i. e.*, "he began to beat."

Verbs ending in vowels sometimes insert a euphonic च or व, so that we get phrases like पिवैक भर, "the fill of drinking," "as much as one can drink." Examples of this form are very common, and one or two others will be given subsequently.

I have met one or two other cases of nouns, which are not verbal nouns, such as धारि, 'an edge,' having a similar oblique form.

Examples,—

(*Direct*) धारि जाइ तऽ कपार झाड़ी, 'if you go to the edge (of a field), have a stick (to protect) your head,' *Mth. Prov.*

(*Oblique*) धारे पास लिखिहे, 'write near the edge,' *Gor. Sgs.* 3.

It will be seen that in all the dialects (except, perhaps, Banáras Bhojpúrí), the termination is short, and that each dialect has one or more of these terminations, *viz.*, ऐ, ए, or अ. To trace the derivation of these forms it will be more convenient, first to consider the derivation of the suffix of the Genitive, which as will be seen further on occurs in the following forms in the various dialects of Bihárí के, कै, and क, or in old Bihárí कऽ, as in Rám. Bá. do., 35, नीके तुलसी कऽ, in which कऽ is written an absolutely separate word. These genitival affixes are all derived from the Sanskrit कृतः, through the Mg. Pr. किए. Here we have a termination ऐ, ए, or अ, formed from a Mg. Pr. termination in इए.

Now, to trace the derivation of the Bihárí oblique form, we are bound by all analogy to refer it to a Mg. Pr. genitive case, and, judging from the analogy of के, कै, or कऽ, we may refer the oblique form of the verbal noun of which we are now treating to a Mg. Pr. genitive case in इए or ईए.

We shall now change the example, and take the root मार, 'beat,' as more convenient to deal with than the root देख, 'see,' which has only doubtful equivalents in Prákrit. We are entitled, then, as above shown, to derive मारे, मारै, or मारऽ from a Mg. Pr. genitive मारिए or मारीए, if

such exists. Such a form as मारीए does exist both in Saurasení and Mágadhí Prákṛit (see Vara. V, 22). Feminine nouns in long ई, form their genitives in ईए, thus नई, "a river," gen. sing. नईए. Moreover, just as मारे, is weakened to मारइ, so in later Prákṛit नईए, is weakened to नईआ, or नईअ.

We may hence conclude that मारे is the direct descendent of मारीए, the genitive singular of the Mágadhí Prákṛit feminine noun मारी.

It now remains (*a*) to see what has become of this Prákṛit nom. fem. मारी in the later Gauḍian languages, and (*b*) to trace it to its Sanskṛit origin.

(*a*). The usual phonetic law of development is that Prákṛit nouns ending in long vowels, shorten these vowels in the modern Gauḍian languages. Under another well known Gauḍian phonetic law, these final short vowels are, in some dialects, liable to elision. Hence we should expect to find a form मारि or मार in the modern languages. Both these forms do exist in the modern languages. Eastern Gauḍian (*i. e.*, Bangálí, and Bihárí) prefers the form मारि,* while western Gauḍian and Maráṭhí prefer the shortened form मार. In all these cases the word is feminine, which shows that मार cannot be derived from a Prákṛit masc. nom. मारो; and the derivation I have suggested is borne out by the following reasons.

(1.) Western Hindí possesses a parallel strong form मारी, derived from the Prákṛit strong form मारिआ, which is itself the strong form of the Prákṛit मारी, from which the modern मारि or मार is derived.

(2.) The declension of this verbal noun in Maráṭhí (see Man. 2nd Ed., p. 53) shows clearly the derivation. In the second declension of Maráṭhí nouns, all nouns derived from Sanskṛit nouns in इ (such as भिंत, 'a wall' from Skr. भित्ति) or ई (such as सुंठ "dry ginger," from Skr. शुंठी) form their oblique form in ई, thus,—भिंती and सुंठी. This is plainly derived from the Prákṛit genitive भित्तीअ, भित्तीइ (Var. V, 22) and शुंठीअ or शुंठीइ, the genitive of feminine nouns in ई and इ having in Prákṛit similar forms. But in Maráṭhí another class of nouns also follows the same declension, *viz.*, "feminine nouns derived from Maráṭhí verbs," such as तूट, 'a deficiency,' obl. तूटी, connected with तुटणें "to break;" and मार, "a beating," connected with मारणें "to beat." That is to say, they are derived from Prákṛit nouns in ई or इ, *viz.*, Maráṭhí तूट, obl. तूटी, corresponds to the Prákṛit तुट्टी, gen. तुट्टीइ, and Maráṭhí मार, obl. मारी; H. dir. मार or मारि; Bihárí मारि, obl. मारे correspond to the Pr. मारी, gen. मारीइ, or मारीए.

In this series, I have given no oblique form for Hindí. In the majority of cases this has disappeared in that language, but it survives in

* Maithilí prefers the form मारि, but Bhojpúrí and Mágadhí (except in poetry) always have मार.

phrases like मारा मारी (a beating on a beating) 'a mutual assault,' दौड़ा दौड़ी, 'a mutual running,' 'a running here and there.' In these phrases मारी and दौड़ी are the direct strong forms corresponding to the Prákṛit nominative मारिआ, and दवडिआ respectively, but मारा and दौड़ा are distinctly oblique forms, which I would derive as follows :—

Pr. nom.	*Pr. gen.*	*Hindí obl.*
मारी	मारीआ (Var. V, 22)	मारा
दवडी	दवडीआ	दौड़ा.

The contraction of these terminations ईआ to आ need not cause any objection. ईआ would naturally become या, and finally आ, just as Pr. किओ, became कओ and finally का, and Pr. करिओ became Hindí कय्यो and finally H. H., कहा. Moreover the form in Páli is मारिया, दवडिया, with a short penultimate, and though no similar form is recorded for Ap. Pr. still H. C. IV, 329 would entitle us to assume the possible existence of such a one.

This direct verbal noun मार or मारि is what is called the root in Hindí grammars. It occurs frequently in Intensive compounds in forms like मार देना, 'to give a beating', &c., and in the so-called conjunctive participle मार के or मारि के or (with the के dropped) simply मार, 'having beaten,' literally 'having done a beating.' So also कर के 'having done the action of doing,' and मार कर के 'having done the action of doing a beating.' के, as will be shown under the head of conjugation, = the Vedic Skr. कर्य (Skr. करना), 'having done'; hence, S'r. Pr. करिअ (H. C. 4, 271), and Hindí (with elision of र) के. Mg. Pr. (Vara. XI, 16) has instead करिदाणि, hence (through करियाणि,) the corresponding Bihárí form कें. (See, however, Hoernle, § 491, for a different explanation of the forms.)

The oblique Hindí form of the verbal noun, मारा, also occurs in Desiderative compounds; *e. g.* वह मारा चाहता है, 'he wishes to beat,' in which मारा is for मारा लिये 'he wishes for a beating'. This is borne out by the Bihárí practice of introducing the post-position ला in such compounds; *e. g.*, (Mágadhí) भेजे ला चाहऽ हौ, 'I wish for sending,' 'I wish to send' (Gr. § 118). It also explains the fact that in Hindí this form (miscalled by grammarians the Past Participle) does not change for gender. Moreover in Hindí it explains clearly the (so-called) anomalous forms जाया (not गया) चाहना, 'to wish to go,' and मरा (not मुआ) चाहना 'to wish to die' (see Kellogg, p. 193). The same form (with the dative particle ला) is also used in Maráṭhí; *e. g.*, (Man. p. 151) वाटते मला खाया ला पाहतो, 'I fancy he wishes to eat me.'

To recapitulate therefore ;—

There is a Prákṛit feminine nominative मारी, which is the direct ancestor of the Gauḍian verbal noun मार or मारि.

This Prákṛit fem. has a genitive which has three forms to be noted at present, *viz.*, मारीए, मारीइ, मारीआ, from which I derive the Gauḍian oblique forms as follows :—

Prá. nom.	Gauḍian nom.	Prá. gen.	Gauḍian obl.
मारी	Bihárí मारि	मारीए	मारे
	Maráṭhí मार	मारीइ	मारी
	H. मार	मारीआ	मारा
(strong form) मारिआ	H. मारी	मारिअहे (Ap.)	मारी

(*b.*) It now remains to trace this Prákṛit मारी to its Sanskṛit original. This is the abstract noun formed in Sanskṛit by the affix टाप् or ङीष्. These two affixes are closely connected, only differing in the kind of verb with which they are employed. They form verbal nouns by adding आ to the stem. Thus—

Verbal stem.	*Verbal noun.*
जीव् "live"	जीवा "life"
लेख् (लिख) "write"	लेखा "a line"

and so many others.

Sometimes a parallel feminine form is found in ई (affix ङीष्). Example

नद् "roar"	नदी "a river."
मार् "kill"	मारी "a pestilence."

The rules as to which stems in Sanskṛit take आ and which take ई, are very intricate, and in the vulgar language were certainly not always adhered to. At any rate, in Prákṛit we find the termination ई superseding the termination आ, so that we have (Var. V, 24).

Sanskṛit.	*Prákṛit.*
सहमाना, "enduring."	सहमाणा or सहमाणी.
हरिद्रा, "turmeric."	हलदा or हलदी.
छाया, "shade."	छाहा or छाही.

Vararuchi in the *Sútra* confines the change to four words only, but we find the option largely extended in the later Prákṛit of Hemachandra

(III, 32, &c.), and it is therefore only fair to assume that in the modern languages the change had become the rule.

We are justified therefore in considering that the Gauḍian verbal noun ending in ए or in a silent consonant, is derived from the Sanskṛit feminine verbal noun in आ or ई (टाप् or ङीष् or ङीप्).

In conclusion I now give examples of the various forms (direct and oblique) of this verbal noun.

(*a*) Direct form ending in ए.

बर कन्या के भेंट नहिँ, घटोंगर ले मारि, "the bridegroom has not yet met the bride, and they are fighting about the wedding bracelet," *Prov.*

देखि ओ नन भेल पड तोरा, "the act even of seeing thee, my husband, did not take place," *i. e.*, "you were not even seen by me." *Vid.* V, 5.

This last is a good example of the formation of the passive voice from this form of the verbal noun. Observe that देखि in the last example must be a verbal noun. If it is attempted to construe it in the sense of the conjunctive participle, nonsense can only ensue. Observe also that it is still a *verbal* noun, and governs the accusative (तोरा).

(*b*). Direct form ending in a silent consonant. (H. Hindí) मुझ को बड़ी मार मारा, "he beat me a great beating," Beames, C. G. II, 50.

(*c*). Oblique form ending in ऐ or इ.

सुमिरे लागल देवी भवानि, "he began remembering the goddess Asávari," *Sal.* 10.

• लावे गेल अपन भाई मोतीराम, "he went for the bringing of his brother Motirám," *i. e.*, "he went to bring him." *Sal.* 20.

Bhojpúrí,—फुल लोढ़े गेलों, 'I went for plucking flowers,' *Gor. Sgs.*. 1.

तो का करे ऐलू, 'for doing what did you come,' *ib.*

Baiswári,—पर अघ सुनै सहस्रदस काना, "with ten thousand ears for hearing others' faults." *Rám. Bá. ch.* 5, 9.

(*d* & *e*). Oblique form in आ, and strong direct form in ई.

(H. H.) मारा मारी, "a mutual beating."

(*f*). Oblique form in ई.

Maráṭhí, या तोडी चा घोडा कोठे नाही, "nowhere is there a horse of this kind." Molesworth, *s. v.* तोड.

We have already seen that the Bihárí terminations हि, हिँ, ऊ and ऊ were originally used as terminations of the genitive in Prákrit. We may hence expect to meet them also used as terminations of general oblique base in Bihárí. This will be found to be the case. I have not noted any instances of हिँ being so used, but instances of the other three are common. The following examples are taken from Manbodh's Haribans.

हि,—अगिलहि दिन सभ उपटल सपटि, 'next day all arose together,' 4, 7.

बिखहिक (बिखहि+क) आगि सिखा, 'the flame of fire was (one) of poison,' 4, 21.

पहिलहि सों मोहि दुग दुग रहइ, 'from the first, have I had this fear,' 6, 21.

ऊ,—लागल सबऊक मुँह पनिआइ, 'the mouths of all began to water, 5, 2.

ऊँ,—हरिऊँक आँखि आइल भरि नोर, 'the eyes of Hari became filled with tears', 9, 52.

आनऊँ सों बहराथि, 'he goes out from the courtyard,' 3, 2.

Note on the preceding Essay.—By A. F. Rudolf Hoernle, Ph. D.

The great difficulty which one still too commonly meets in the comparative study of the Gauḍian languages, with regard to the derivation of their inflectional forms, is the want of continuity in the descent of the latter. We know them in their modern Gauḍian stage, and in their ancient Prákrit stage; but very often the intermediate links are unknown. These would have to be looked for in the popular literature of the period intermediate between Gauḍian and Prákrit; that is, about 700 to 1000 years ago. I say, the *popular* literature, because the Gauḍians are not descended from the Literary Prákrits, but from the vernacular (Apabhraṃśa) forms of Prákrit. Of such popular literature, if it existed, very little has survived, or, at least, is known to have survived. One of the oldest specimens is the Hindí Epic of Chand, the *Prithiráj Rásau*, which is about 700 years old. Moreover, this as well as nearly all of the older popular literature known to us is in verse, while, for the particular question of derivation, prose literature would be far more useful.

Besides such fragments of survived popular literature, some help is afforded by those portions of the later Prákrit grammars which treat of the Apabhraṃśa Prákrit, and in which their authors have embodied many comparatively modern forms, current in their own time, mixed up with much older forms known to them traditionally. This remark applies, for example, to the grammar of Hemachandra, who lived about 750 years ago.

Whenever the intermediate links are wanting, it is both natural and right to bridge the gap by the help of conjecture, and it is nothing surprising, that conjecture sometimes takes differing lines and arrives at different results. There are, however, instances of forms, of which the series of links of descent is almost, if not entirely, complete; and it may be hoped, that gradually, as our knowledge extends, their number will increase.

One such instance occurs among the forms referred to in the preceding Essay. This is the form ending in ऐं, ऍं or ऐ, ए and occurring in such words as पाछे or पोछे "behind" or "afterwards", जैसे-तैसे "*as-so*," etc. These forms

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may end in *ai*, or *e*, with or without a nasal; thus पाछै or पाछे, पाछै or पाछे॑. The nasalised and unnasalised forms are equally common; but the forms in ए or ए are modern and in present use, while those in ऐ or ऐँ are older. The latter are still met with in the Rámáyan side by side with the more modern forms. Examples of both may be seen on pages 122, 123. In the much older Hindí of Chand's *Prithiráj Rásau*, only the forms in ऐ or ऐँ occur; both, with or without nasal, being used promiscuously. But by the side of them, a still older form in अइ or अइं is occasionally met with.

Thus; ऐ in

इकं इक्क पच्छै बियं जंन जोरं। "the men walked in pairs, one (pair) behind the other," XXXV, 18.

सुनि हाहुलि हंमीर हत्थ जोरै नृप अग्गै। "Hahuli Hammír, hearing it, joined his hands before the king," XXXV, 16.

सकल भूमि कौ भेद राज जानै ए भग्गै। "the king knows the whole condition of the land in this part (of the country)" XXXV, 17.

ता पहिलै पायान जोध रन असुरन कड्ढिय। "before that (*i. e.* sunrise) the warriors mounted and issued forth to the battle-field against the enemies," XXXIV, 32.

Again ऐँ in

मानों कि रास भज्झैँ गुपाल। "just like Gopál in the midst of his sport," XXXV, 25.

दीय कग्गद लिषि अग्गैँ। "he gave (him) a letter, which he had written before," XXXIV, 21.

पच्छैँ ही भज्जियै होइ दुज्जनां हसाई। "if ever you flee back, it will be the laughing-stock of the enemies," XXXIII, 19.

रविवार सुरंग सु सत्तमैं गुन प्रमान जंबुअ षुल्यौ। "on a Sunday, the seventh (of the month), by means of a mine, cleverly laid, the fort of Jambu was breached;" XXXV, 21.

श्रीयकाज श्रीराम सु छल हनमंतह तैसैं। स्वामि काज सामंत बियौ धर मंझव जैसैं॥ "The Sámantas in the service of their lord entered into the enemy's country exactly in the same artful way as Hanumán did in the glorious service of Ráma," XXXV, 21.

असवार ऐसैं सनाहंत कट्टं। मनो बीय सौकी पियं भाग वट्टं॥ "The armoured horsemen were so cut to pieces, as a husband's fortune is scattered by (his taking to himself) a second wife," XXXII, 62.*

Again अइं

occurs in the last quoted instance, where one manuscript has preserved the old form जैसइं.

There is good reason to believe that these older forms in अइ, for ऐ, were much more frequent in the Epic as originally composed by Chand. For

* The printed edition has ऐसें, which is a misprint.

occasionally, where the MSS. now read ऐ, the metre requires अइ, thus showing that the form ऐ is a later one, due to subsequent copyists.*

Now turning to Hema Chandra, we find that the usual form in the Apabraṃśa Prákrit is अइ, while by the side of it occasionally अइं and अहिं occur.†

Thus: अइ in

एहउँ वढ़ चिंतंतहं पच्छइ होइ विहाणु। "for thee, O fool, who think thus, it becomes at last morning;" IV, 362, 420.

तो हउँ जानउँ एहु हरि जइ मह अग्गइ ब्रोष्पि। "hence I know (that) it is Hari when he speaks before me," IV, 391.

पिअ जोअँतिहे मुहकमलु एम्वइ सुरउ समत्तु। "when I see the lotus-face of my beloved, then my pleasure is complete," IV, 332, 420.

Again अइँ in

पइँ विणु धवल न चडइ भरु एम्वइँ वुन्नउँ काइँ। "without thee, beloved, the load does not fall, why then art thou grieved?" IV, 421, 423.

Again अहिं in

एम्वहिं राह पओहरहँ जं भावइ तं होउ। "now let what may happen to the breasts of Rádhá," IV, 420.

जामहिँ विसमी कज्जगइ जीवहँ मज्झे एइ। तामहिँ अच्छउ इअरु जणु सुअणु वि अंतरु देइ॥

"As long as there is this perverse mode of business among men, so long let the evil man engage in it, but the good keeps aloof," IV, 406.

Here एम्वइ, एम्वइँ and एम्वहिँ are evidently equivalent forms, an inflection of the pronominal base एम्व, corresponding to जेम्व, तेम्व (see H. C. IV, 401, 418). In Chand this inflection occurs in the modified form अव्वै or अवै "then," "now."

* There is a similar case. The termination of the third pers. sing. present in Hindí is now ए; the older form is ऐ, and a still older form is अइ. The latter occasionally occurs in Chand; *e. g.*, मुक्कइ न गिद्धि पच्छै अजूह, "the flock of vultures does not cease (following) behind," XXXV, 22. Similarly रुट्ठइ "he is angry," नट्ठइ "it is spoilt," in XXXV, 25. In XXVI, 52 थानथान नर उडै "men fly up in different places," we have उडै, for उडइ as the metre requires, which shows that Chand must have written उडइ. The form in अइ is Prákrit.

† In the examples quoted from Hemachandra, I have substituted the *anunásika* (ँ) in several places for the *anusvára* which appears in the printed edition of Prof. Pischel, who follows herein the MSS. That the former is correct, is shown by the metre, which is the well-known *dohá* in all those examples. Prosodically the difference between the two sounds is great, the *anusvára* making the preceding vowel *long by position*, while the *anunásika* has no such effect. In *writing* Natives are apt to overlook this difference, but never in *pronunciation*.—In the second example (from IV, 391) the printed edition (and MSS.) has एहो which, as the metre shows, should be एहु (cf. H. C. IV, 362).—In the sixth example (from IV, 406) एइ does not represent the Skr. एति "it goes," as Trivikrama's commentary erroneously translates, but the Skr. एषा (nom. sing. fem. of एतद्) "that" (see H. C. IV, 363); it qualifies कज्जगइ.

Similarly जामहिं—तामहिं "*so long-as*," "*when-then*," are inflections of the pronominal bases जाम, ताम, which, with the same meaning, are met with, both in the Ap. Prák. and in Chand, *e. g.*,

जाम न निवडइ कुभयडि सीरचवेडचडक्क। ताम स मत्तहँ मयगलहँ पइ पइ वज्जइ डक्क॥ "so long as the cracking blow of a lion's paw does not fall on their broad forehead, that noise of the mad, furious elephants resounds," H. C. IV, 406.

हंकरै सिंह कौदह ति वाम। उत्तरै देवि दाहिन सु ताम॥ "a lion roared on their left side, then Devi descended on the right (side)," *Prithiráj Rásau*, XXXV, 22.

Both this and the preceding set of pronominal bases correspond to the Sanskrit यत्, यावत्, तावत्.

Now this evidence shows that the Gauḍian termination एँ, ए, etc., cannot be identified with the Sanskrit instrumental termination एन, but that it is to be traced back to the Apabhraṃśa Prákrit ending अहि or अहिं.

There is another circumstance, making for the same conclusion, which is worth noting. There is good reason to believe that the Sanskrit termination एन, whenever it was employed in the later vernaculars (which happened occasionally) was always felt to be a tatsama and preserved nearly intact. The vowel ए was, sometimes, shortened, but the final न was not changed into a mere nasalisation of ए. In Chand the Sanskrit instrumental in एन occurs but very rarely, and always unchanged; thus,

इह सार सुद्दं मिद्दिय डरेन। जानियै चौय वयसंधि तेन॥ "In this battle success was missed through their cowardice; thereby you may know (that they behaved like) young women," XXXIII, 30.

In Bangáli the forms केन *kĕna* "so," केन *kĕna* "why," केन ना *kĕn'na* "because," जेन *jĕna* "as if" are still in use (see Shama Churn Sircar's Bg. Gr., pp. 217, 218, 237, 238); here *ĕ* is short, but *na* is intact. Perhaps the commoner Bangáli forms जेमन *jĕman* "as," तेमन *tĕman* "so," केमन *kĕman* "how" (*ibid.*, p. 216) may be similarly explained as instrumentals of the Apabhraṃśa pronominal bases जेम्व, तेम्व, केम्व (above noticed), the old ending एन being shortened to अन, but again keeping the final न intact. In Maithilí, also, occur जेना *jenă* "as," तेना *tenă* "so," (see Grierson's Mth. Gr. Part I, p. 109, in Extra No. of J. A. S. B., 1880),* where the final long आ is merely the Maithilí way of indicating a short open *ă* as distinct from अ, which latter is pronounced something like *ăw*.

There remains the question to what inflectional case the Apabhraṃśa Prákrit terminations अहि or अहिं belong. Now Hemachandra (IV, 357) expressly ascribes the suffix हिं to the locative sing. of masc. and neut. bases in *a*, and also (IV, 347) to the loc. plur. of all bases, whether ending in *a* or *i* or *u*. He further ascribes (IV, 341, 352) the suffix हि to the loc. sing. of all bases in *i* and *u*, and to fem. bases in *a*. We have therefore Hema-

* Maithilí जैं, तैं are, I think, contractions of the Ap. Pr. जहिं, तहिं (H. C. IV, 357).

chandra's express authority for looking on the termination अहिं as indicating the loc. sing.; and since the suffix हि (as a locative suffix) is in all probability a mere variety of the suffix हिं, we may assume that, even though not noticed by Hemachandra, it might also be used with bases in *a*, just as with bases in *i* and *u*.* However that may be, it is certain that in after times both suffixes हिं and हि were used as terminations of the locative singular. This is proved both by the usage of Tulsí Dás in his Rámáyan and of the Maithilí, as already stated in the preceding Essay, pp. 126, 130. If modern pandits maintain that the suffix हिं is always used by Tulsí Dás in a plural sense, they can only do by saying that when it is used in the singular it conveys an honorific sense. But this is merely an easy method of theirs of squaring awkward facts with a pre-conceived theory. *Pace* the pandits, we must judge for ourselves; for instance, taking the example, quoted on p. 123, there is no conceivable reason why अनरितुहिं "not in season," should have a plural sense, whether honorific or otherwise, standing as it does by the side of the singular रितु "in season". Many other examples, of similar undeniable singulars, might be cited.

It may be added that in the examples quoted above (p. 160) from Chand the words भग्गे "in this part," सत्तम "on the seventh day," and many other similar instances, cannot well be explained as anything else than locatives.

However, I am not absolutely concerned to prove that every single modern form in ए or ऐ corresponds to an Ap. Prák. locative. It is certain that a later period, the affixes हिं and हि were used in a much looser way, as a sort of general inflectional suffix (as may be seen from the examples, cited on pp. 122—125), and it is, therefore, quite permissible to say, that the modern termination ऐं is used in the sense of the instrumental in certain cases (*viz.*, in the regular declension of the Maithilí, see Grierson's Mth. Gr. Part I, p. 9). This does not apply, however, to phrases like पाछे, आगे, etc., which can be directly traced to the Ap. Pr. and shown to be locatives. But in any case, by whatever particular case-name they may be called, the modern forms in ऐं, ए are direct descendants of Ap. Pr. forms in अहिं, अहि.

I will only add, in conclusion, that I am inclined to agree with the theory put forward on pp. 154ff regarding the probable derivation of the verbal noun in *a* or *i*, obl. *ai* or *e*, though I should carry up the descent of the oblique forms to the Ap. Pr. terminations in हि and ञ्ञ rather than to the literary Pr. termination in एँ. Thus, the obl. देखञ and देखे (p. 151) correspond to the oblique घरञ and घरे (see p. 151), and I would identify the South Maithilí and Mágadhí oblique घर० (pronounced *gharāw* with *āw* as in the English "law") with Ap. Pr. घरञ्ञ, while the Mágadhí obl. घरे is the same as Ap. Pr. घरहि. I hope to have another opportunity of further explaining this view.

* Indeed, as H. C. gives both forms एम्वइ (= एम्वहि) and एम्वइं (= एम्वहि) promiscuously, he virtually allows the unnasalised suffix हि to *a*-bases.

*On the Temples of Deoghar.**—*By* Rájendralála Mitra, LL. D., C. I. E.

(With a Plate.)

Deoghar, 'the home of gods,' is a small town, four miles to the south of the Baidyanáth Station on the chord line of the East Indian Railway, and about two hundred miles due west of Calcutta. Lat. 24° 29′ 43″ N. Long. 86° 44′ 36″ E. During the later Muhammadan rule it formed a part of the Bírbhúm district, but it is now included in the Santál Pargannahs, lying on its west side. It is situated on a rocky plain, having a small forest immediately on the north, a low hill on the north-west, called Nandana Páháḍa, a large hill called Trikúṭa-parvata about five miles to the east,† and other hills to the south-east (Jálme and Páthádu), south (Phuljüárí), and south-west (Digheriá), at varying distances, but within twelve miles from its centre. Immediately to the west of the town proper there is a small rivulet named Yamunájor, about 20 feet broad, which exists as a dry ditch for the greater part of the year. About half a mile to the west of this runs the river Dhárawá, which, making a bend, runs also along the south at a distance of about a mile from the town. The space between the town proper and the river on the south side belongs to the Ghátwáli estate of Ṛohiní; but the town of Rohiní is situated about three miles to the west of the river. The river varies in width from 50 to 120 yards, and during the rains and for two months afterwards is a shallow stream, but in the hot months it is a dry bed of sand from which water is drawn by scraping the sand to the depth of about a foot. It takes its rise in the hills of the Házaríbág district, and, after a winding course, falls into the Mor or *Mayúráksḥí* 'the peacock-eyed,' *i. e.*, having water lustrous as the eye of the peacock, near Suri, receiving, before the junction, the waters of the aforesaid Yamunájor. It is subject to very serious freshets. After a heavy shower during the preceding night, I noticed, one morning at 6 o'clock at the end of October, 1881, the water to be barely three feet deep, and four hours

* There are notices of the archæology of the place in Montgomery Martin's 'Eastern India', Vol. II; in Hunter's 'Annals of Rural Bengal,' and in his 'Statistical Account of Bengal,' Vol. XIV; in the 'Mukarjee Magazine,' (a note by Bábu Bholánáth Chunder); and in the Archæological Survey Reports, Vol. VIII, (Mr. Beglar's Report); but none of them is such as to preclude the necessity of a detailed account. None of them gives the inscriptions to be found at the place.

† Mr. Beglar says, "Eight miles *north-west* from Baijnath is a group of hills with three curious peaks, it is known as the Trikuta hills," p. 145. The direction given is quite wrong.

afterwards, there was an impetuous current eight feet deep, and so strong that none could swim across it. I was, on the occasion, placed in a ludicrous situation. My cook had forded the river at early dawn, right opposite to my bungalow, and at 10 o'clock, when he returned with his purchases, the river was impassable, and I had to satisfy myself with the sight of the materials of my breakfast waiting on the opposite bank. The water subsided at 3 P. M., when my servant easily recrossed the river by fording. I have been told that the freshets are at times so sudden that a person may be overtaken by one before he has half crossed the river.

The forest on the north is called Dátá Jungle, deriving its name from that of a Fakir, whose descendants now own the land. It appeared to me very like a hunting-ground or Shikárgáh of some old Rájá, not unlike the hunting-ground of the Dumraon Mahárájá, but much smaller, being limited to an area of about a mile and a half. It is not much encumbered by brushwood, and one can very easily walk about in different parts of it.

The area of Deoghar is under two miles, and the fixed population at the last Census was reckoned at 8005, of which 4964 were males and 3041 were females. But the influx of pilgrims on particular holidays is said to rise from two to fifty thousand heads. The pilgrims, however, do not, generally speaking, prolong their stay in the town for more than 10 to 12 hours, and their presence does not seem ordinarily to affect much the sanitary condition of the town, which has the reputation of being highly salubrious. The soil is fertile, and the crops are rich; but the cultivation is carried on principally by the Santáls who live in the neighbourhood, and not by the Hindú population, among whom there are about 300 families of priests, a good many of whom look for their earnings mainly to the gullibility and the religious zeal of the pilgrims.

Deoghar is now the head-quarters of a subdivision, and has besides the usual public offices, a good hospital and a school teaching up to the Entrance standard of the Calcutta University. A Municipal Committee, with an income of about two thousand rupees a year, has charge of the sanitary establishment of the town, and to their credit it must be said that the roads and drains of the place look clean and well taken care of.

In so far the place is of little importance. It is, however, of much interest to antiquarians, on account of a large sanctuary which stands in its centre.

There is no temple in Bengal which can claim a higher sanctity than that of Baidyanátha at Deoghar. Its renown is acknowledged by a hundred thousand pilgrims, who resort to it every year, and its antiquity is carried back in some of the Puráṇas to the second age of the world. It was in the Tretá Yuga, says the Śiva Puráṇa, that the cruel Titan, Rávaṇa,

feeling that his golden metropolis in Ceylon, rich and unrivalled as it was, would not be perfect without the presence in it of the great god Mahádeva himself, repaired to the Kailáśa mountain to secure the grace of that dread divinity. It so happened, however, that the god was at the time in the society of his consort, who was then in a huff, and Nandi, the warder at the gate of his mansion, would not permit a stranger to pass in. But the demon was not to be so easily baulked. He seized the warder by the neck, and hurled him to a great distance from his post. This made the mountain tremble, and the lady in very fear gave up her anger, and sought the protection of her lord.* Śiva was greatly pleased at this occurrence, and when the unmannerly demon pleaded in excuse of his conduct by asserting to the host that as a son he was justified in appearing before his parents at all seasons, and the warder had no business to prevent him, the god readily offered him a boon. The prayer was then made in due form that he should take his permanent residence with the demon. This was, however, not granted. Rávaṇa was told that one of the twelve resplendent emblems of the divinity (*Jyotirliṅga*) would be quite as effective as Śiva *in propriâ personâ*, and that Rávaṇa might take it away on the only condition that the transfer should be effected without a break in the journey, but that should the liṅgam be deposited anywhere on the earth in course of the journey, it would proceed no further, but stick there for ever. To Rávaṇa, accustomed to travel from Ceylon to the heaven of Indra and back, the condition did not seem very hard, and he assented. The liṅgam was immediately taken up, and the journey begun. There were, however, difficulties in the way which the demon did not think of. The gods dreaded the effect of the liṅgam being established in the kingdom of one who was the most powerful enemy of the celestial hierarchy, and if Mahádeva were to be the protector of that demon's metropolis, there would be no means left them for his overthrow. They accordingly sat in solemn conclave, and devised their plan of outwitting their enemy. Varuṇa, the regent of the waters, entered the belly of the demon, and created an unpleasant sensation, and a pressing necessity soon arose for Rávaṇa to relieve himself. Vishṇu, in the garb of a decrepit old Bráhman, appeared before him, and accosted him. Unconscious of the plan that had been laid to entrap him, Rávaṇa begged of the Bráhman to help him by holding the god for a few minutes, and the request was readily acceded to. Rávaṇa made over the liṅgam to him, and retired to a side. He was greatly delayed in his return by the mischievous action of the god of waters within him, and

* There is a story very like this in Pilpay's 'Fables,' and in it the presence of a thief makes a truant wife reconciled to her lord.

when he came back, lo! the Bráhman had disappeared, and the liṅgam was lying on the ground at a considerable distance from the spot where he had alighted.* The spot where Rávaṇa had descended is now called Hárlá-juri; the place where the liṅgam was deposited is Deoghar; and the Vaidya-

* कैलासशिखरे गौरी यदा मानवती सती।
दर्शनार्थं दशग्रीवस्तत्काले समुपागतः ॥ ८९ ॥
द्वारमुल्लङ्घ्य सहसा पुरं गन्तुं समुद्यतः।
नन्दिना वारितस्तत्र कुत्र यास्यसि रावण ॥ ९० ॥
एवं श्रुत्वा दशग्रीवो महाक्रोधैः परिप्लुतः।
निक्षिप्य नन्दिं सहसा कैलासं चालयत्तदा ॥ ९१ ॥
कैलासाचलकम्पेन गौरी भयसमाकुला।
मानं त्यक्त्वा ततो देवी शिवस्य शरणं गता ॥ ९२ ॥
पार्व्वत्या गमनं दृष्ट्वा महाहर्षेण संयुतः।
केनेदं चालितं शैलं कथयामास नन्दिनं ॥ ९३ ॥
रावण उवाच। मयेदं चालितं प्रभो शैलं चैव दयानिधे।
नन्दिना मदमत्तेन लद्दर्शननिवारणात् ॥ ९४ ॥
अज्ञानोऽहं महादेव मोहितस्तव मायया।
न ज्ञातं विहितं कर्म्म दोषोऽयं क्षन्तुमर्हसि ॥ ९५ ॥
श्रीमहादेव उवाच। भयं त्यजसि हे वत्स प्रसन्नोऽहं दशानन।
वरं वृणुष्व भद्रन्ते ददामि मनसीप्सितं ॥ ९६ ॥
रावण उवाच। यदि प्रसन्नो भगवन् वरं दास्यसि मे प्रभो।
तर्हि त्वं मम लङ्कायां गच्छ कामसुसिद्धये ॥ ९७ ॥
श्रीमहादेव उवाच। गृहाणेदं महालिङ्गं ज्योतीरूपं निरामयं।
सर्व्वेषां कामजननं भूमिस्थस्यैनकं विना ॥ ९८ ॥
एतस्मिन्नन्तरे तत्र पार्व्वती रावणाय वै।
आचमनार्थं जलमदात् मन्त्रेण मेघसंयुतं ॥ ९९ ॥
तेनाहृत्य दशग्रीवो लिङ्गमुत्थाप्य बलतः।
स्कन्धे संस्थाप्य सहसा गतो यास्यदिदं प्रति ॥ १०० ॥
ततस्तु प्रार्थितो देवैर्विष्णुर्वैद्यार्द्दपीठके।
कृत्वा ब्राह्मणरूपेण प्रच्छन्नः प्राहतो यथा ॥ १०१ ॥
एतस्मिन्नन्तरे तत्र रावणो मूत्रपीड़ितः।
आगत्य ब्राह्मणं दृष्ट्वा प्रणम्याह सशङ्कितः ॥ १०२ ॥

nátha of our day is the liṅgam aforesaid. Deoghar as a name of the place is, however, quite modern. In Sanskrit works we find in its place Hárdapíṭha, Haridrápíṭha, Rávaṇa-kánana, Ketaki-vana, Haritaki-vana, and Vaidyanátha. In Bengal the place was generally known under the last name, but the East Indian Railway Company having opened a station near it and assigned to the town that has grown up around it the name of Baidyánatha, the people, for the sake of distinction, have used the name of Deoghar. In the Post Office seal the name is Baidyanáth Deoghar.

The story as related in the Vaidyanátha-máhátmya of the Śiva Puráṇa is embellished with many tedious and circumstantial details which it is not necessary to notice here, particularly as those details are not borne out by the Padma Puráṇa, which alters them to a considerable extent. As both the versions are fictitious—the results of wild, uncontrolled fancy—they are of no interest except to the pious Hindú.

The story runs that Rávaṇa tried hard to remove the liṅgam from the spot where it had been placed, but failed. The divinity would on no account move from the place. The Titan, growing desperate, used violence; but that served only to knock off a bit from the top of the liṅgam, but not to move the divinity from the position it had taken. This showed the folly of the course Rávaṇa had adopted, and he fell at the feet of the liṅgam, and begged for pardon. He made amends, too, for his sacrilegious violence by daily coming to the place and worshipping the divinity with sacred water brought from the source of the Ganges on the Himálaya mountains. The latter part of the operation was subsequently dispensed with by the excavation of a well in which the waters of all the sacred pools on the face of the earth were deposited.

दण्डमात्रं त्वया ब्रह्मन् लिङ्गन्तु येन केन वै ।
धारणीयं प्रयत्नेन रत्युक्तो तत्करे ददौ ॥ १०३ ॥
ततो देव्या प्रदत्तेन तोयेन वज्रमूचकः ।
रावणो ह्यभवत्तत्र दुःखेन पीडितो भृशं ॥ १०४ ॥
तदा व्यतीतकाले तु विष्णुना द्विजरूपिणा ।
स्थापितो वैद्यनाथाख्यः पातालस्य च भेदकः ॥ १०५ ॥
गते कियति काले तु रावणः शोचमाचरन् ।
बाहुभिः सहसोत्थातुं न शक्तोबलमोहितः ॥ १०६ ॥
तदा च सुदृढं स्थाप्य निजचिह्नस्य हेतुना ।
प्रणम्य गिरिजाकान्तं गतश्च स्वं निकेतनं ॥ १०७ ॥
एवं वज्रप्रकल्पेषु रावणस्य च हेतवे ।
प्रादुर्भवद् वैद्यनाथाख्यो ज्योतिर्लिङ्गो महाप्रभः ॥ १०८ ॥

Vaidyanátha-máhátmya of the Śiva Puráṇa, Chapter 4.

According to the Padma Puráṇa, the Bráhman deposited the liṅgam in due form, consecrated it with water from a neighbouring tank, repeated his prayers, and then departed. A Bheel was present when this was done; he received instructions from the Bráhman and, following his example, worshipped the liṅgam, but having no vessel handy, brought the water for worship in his mouth, and used it in his adoration. When Rávaṇa at last returned, he related all the circumstances, and pointed out that the Bráhman was no other than Vishṇu himself. Rávaṇa then excavated a well with an arrow, brought into it the waters of all the sacred pools on earth, and duly worshipped the god.* This is obviously a S'ivite version of the story of the

* तावत्तेन तु सन्दिष्टो ब्राह्मणस्तत्र सोऽपि वै ।
भिल्लो दृष्टश्च गङ्गोदपूर्णवक्त्रो विमत्सरः ॥ ८१ ॥
लिङ्गमध्ये तु गङ्गोददायकोयवनोपमः ।
दृष्ट्वा तं कथयामास रावणो विस्मयान्वितः ॥ ८२ ॥
कोऽसि त्वं केन चायं वै लिङ्गः संस्थापितो वद ।
किञ्चानेन फलं नित्यपूजकेभ्यः प्रदीयते ॥ ८३ ॥
कथङ्कारं जनैः सेव्यं क्व गतः स च ब्राह्मणः ।
स्थापनस्य माहात्म्यञ्च तन्मे ब्रूहि यथार्थतः ॥ ८४ ॥
अलिङ्गन (सत्येन तु) त्वया वाच्यं सुहृत्संशयसाधकं (भञ्जनं) ।
इति लङ्केशवचनं श्रुत्वा भिल्लः कृपापरः ॥ ८५ ॥
कथयामास तत्सर्व्वमादितोऽन्तावधि स्वयं ।
दशग्रीव त्वया यस्य हस्ते लिङ्गः समर्पितः ॥ ८६ ॥
स वै विष्णुर्विप्ररूपी वञ्चनाय समागतः ।
आचमनापदेशेन पार्व्वतीप्रेषितेन च ॥ ८७ ॥
तवोदरे प्रविष्टेन मेघेन चिरमूत्रितं ।
भवत्तापं विनिर्नेतुं मुहूर्त्तादूर्द्ध्वमेव च ॥ ८८ ॥
कालं दृष्ट्वा च हरिणा प्रतिज्ञारक्षकेण च ।
अतिक्रान्ते तु तत्काले लोकानां मुक्तिहेतवे ॥ ८९ ॥
प्रस्थापितमिदं लिङ्गं लोकानां भाग्यहेतुकं ।
विष्णुना स्थापितं लिङ्गं पूजयेद्यो विधानतः ॥ ९० ॥
सोऽचिरेणैव कालेन लब्धकामो भविष्यति ।
मया तु फललाभाय तस्य विप्रस्य वाक्यतः ॥ ९१ ॥
प्राप्यमपाय्यविधिना केवलैर्भक्तिभावतः ।
वक्त्रेणानेन गङ्गोदस्थापितं प्रतिपर्व्वणि ॥ ९२ ॥
सम्पूज्यते लिङ्गमेतत् धर्म्मकामार्थसिद्धये ॥ ९३ ॥

Vaidyanátha-máhátmya of the Padma-puráṇa. Chapter 2.

fowler Viśvavasu who worshipped Jagannátha before the Hindús took up that divinity.*

After the death of Rávaṇa, according to one set of traditions, (not noticed in any Puráṇa), the liṅgam lay neglected for ages, until it was noticed by a rude hunter, Vaijú by name, who accepted it for his god, and worshipped it daily, and proclaimed it to the world as the lord of Vaijú—Vaidyanátha. Before this occurrence, the liṅgam was known by its original name of *Jyotirliṅga*, the liṅgam of light, or the name it derived on its transfer, Rávaṇeśvara.

The Santál tradition differs from this. According to it, as summarised by Dr. Hunter in his interesting 'Annals of Rural Bengal,' "In the olden time,' they say, 'a band of Bráhmans settled on the banks of the beautiful highland lake beside which the holy city stands. Around them there was nothing but the forest and mountains, in which dwelt the black races. The Bráhmans placed the symbol of their god Síva near the lake, and did sacrifice to it; but the black tribes would not sacrifice to it, but came, as before, to the three great stones which their fathers had worshipped, and which are to be seen at the western entrance of the holy city to this day. The Bráhmans, moreover, ploughed the land, and brought water from the lake to nourish the soil; but the hill-men hunted and fished as of old, or tended their herds, while their women tilled little patches of Indian-corn. But in process of time the Bráhmans, finding the land good, became slothful, giving themselves up to lust, and seldom calling on their god Síva. This the black tribes, who came to worship the great stones, saw and wondered at more and more, till at last one of them, by name Byju, a man of a mighty arm, and rich in all sorts of cattle, became wroth at the lies and wantonness of the Bráhmans, and vowed he would beat the symbol of their god Síva with his club every day before touching food. This he did; but one morning his cattle strayed into the forest, and after seeking them all day, he came home hungry and weary, and having hastily bathed in the lake, sat down to his supper. Just as he stretched out his hand to take the food, he called to mind his vow; and, worn out as he was, he got up, limped painfully to the Bráhmans' idol on the margin of the lake, and beat it with his club. Then suddenly a splendid form, sparkling with jewels, rose from the waters, and said: 'Behold the man who forgets his hunger and his weariness to beat me, while my priests sleep with their concubines at home, and neither give me to eat nor to drink. Let him ask of me what he will, and it shall be given.' Byju answered, 'I am strong of arm and rich in cattle. I am a leader of my people; what want I more? Thou art called *Náth* (Lord); let me too be called Lord, and let thy temple go by my name.' 'Amen,' replied

* Cf. my Antiquities of Orissa, II, p. 102.

the deity; 'henceforth thou art not Byju, but Byjnáth, and my temple shall be called by thy name.' "*

Romantically as this story has been narrated by the charming writer, it is as thoroughly fictitious as the one that the Hindús recite, and utterly worthless as data for any historical inference. It cannot be under any circumstance more than three hundred years old; it is probably of a much more recent date. The Indian-corn, which the women of the black races are said to have cultivated, was unknown in this country before the Spaniards or the Portuguese brought it from America, and the black races could not possibly have known it in the olden time, or about the time when the temple was first built. There is no name for the corn in the Sanskrit language, and the vernacular names *Janérá*, *Bhuṭṭá*, *Makká* are all obviously foreign. In *Janérá* we have Rio Janeiro, and in *Makká* we recognize the *Mahiz* of the Island of Hayti, whence maize was first brought to Europe. It is true that the aboriginal races now cultivate it very largely, but that is not due to its being an aboriginal product, but to its being easily cultivated, and therefore better suited to the primitive husbandry of the Santáls. The "three stones of aboriginal worship" are altogether a misidentification. As will be shown in the sequel, they are parts of a purely Hindú structure, attached to a Hindú temple, and used for Hindú ceremonials. It may be added that the tomb in which the mortal remains of Byju are alleged to be deposited is scarcely two hundred years old. Byju is no other then a clumsy copy of the Puránic Bhilla, the forester, and must go the way of his archetype.

Some of the Puráṇas, without openly rejecting the story of Rávaṇa, carry the date of Vaidyanátha's advent at Deoghar to a much earlier period. It was not in the second, but in the first, age of the world, *Satya Yuga* or the "age of Truth," when the gods of heaven had not yet settled down to their respective places, and jealousies and rivalry and dissensions were rife for precedence, that Śiva, claiming a higher rank than that of his father-in-law, Daksha, treated him with marked discourtesy at a public assembly. The patriarch resented this by not inviting him to a grand sacrifice, and Sati, the daughter of Daksha, failing in her expostulations with her father, committed suicide, rather than continue to be known as the daughter of one who had reviled her divine husband. Overpowered by grief, Śiva, in a fit of frenzy, stuck the corpse of his wife on the point of his trident, and roamed about as a madman. The sight created a scandal, and nobody being able to approach and remonstrate with Śiva, Vishṇu cut up the body with his discus into fifty-two parts, which fell on different parts of India. The heart fell at Deoghar, and thence that place attained its sanctity, and became known by the name of *Hárdapítha* "the sanctuary of the heart."

* 'Annals of Rural Bengal,' pp. 191*f*.

Siva nursed his grief here for a long time, carrying the heart on his breast like the Scotch knight who brought away the heart of Richard I, from France, and earned the surname of Lockheart, changed afterwards to Lockhart. It is added, that inasmuch as this was the only way in which Siva offered the final obsequies to his consort, the place derived the alternative name of *Chitábhúmi*, the "cremation ground." It is worthy of note, however, that at present there is no temple, shrine, or spot at Deoghar which is associated with this occurrence, though at all the other fifty-one places mementos of some kind or other are still extant.

Yet another story. It was again at the first age of the world that Siva manifested himself as liṅgams of light at twelve different places under different names. These included 1st, Somanátha, in Saurásht̤ra; 2nd, Mallikárjuna at Śríśaila; 3rd, Mahákála at Ujjain; 4th, Oṅkára, at Amareśvara; 5th, Kedára, on the Himálaya; 6th, Bhímaśaṅkara, at Ḍákiní; 7th, Viśveśvara, at Benares; 8th, Tryambaka, on the banks of the Gautamí; 9th, Vaidyanátha, at Chitábhúmi; 10th, Nágeśa at Dwárká; 11th, Rámeśa, at Setubandha; and 12th, Ghuṣr̤ṇeśa, at Śiválaya.* These include all the principal and most celebrated liṅgams in India.

On the top of the liṅgam at Deoghar, the goddess Sati appeared as a pandanus flower, and for a long time afterwards dwelt in a grove near it in order to be ready at hand to worship the emblem of her lord. Owing to this circumstance the place became known as *Ketakivana*, or the "pandanus grove."

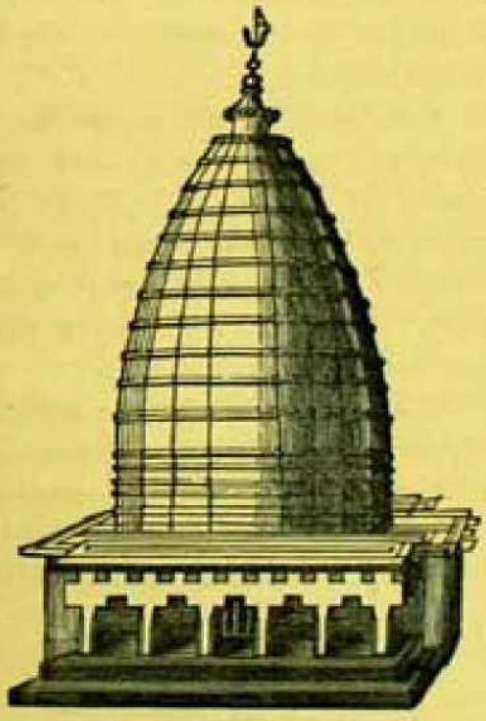
How our Pandits reconcile these contradictory stories, I know not, and it would be futile to inquire into the subject. But to turn to the memorials now extant with which these stories are associated.

The temple of Vaidyanátha now stands in the middle of the town, and is surrounded by a courtyard of an irregular quadrilateral figure. See plan, Plate XV. The east side of the courtyard facing the public road measures, from north to south, 226 feet, and near its southern limit there is a large arched gateway with a Nuhbatkháná on top of it. The Nuhbatkháná is, however, not much used, a separate two-storeyed building, close to the north of it, having been provided for the musicians. The gateway also is not much used, as it has been partially blocked by a one-storeyed building. On the south side, which is faced by a range of shops, the length is 242 feet. On

* सोराष्ट्रे सोमनाथं च श्रीशैले मल्लिकार्জ্জুनं ।
उज्जैन्यां च महाकालं ॐकारममरेश्वरे ॥ ४८ ॥
केदारं हिमवत्पृष्ठे डाकिन्यां भीमशङ्करं ।
वाराणस्यां च विश्वेशं त्र्यम्बकं गौतमीतटे ॥ ४९ ॥
वैद्यनाथं चिताभूमौ नागेशं दारिकावने ।
सेतुबन्धे तु रामेशं घुश्मेशं शिवालये ॥ ५० ॥ वैद्यनाथ माहात्म्यं ।

the west, the length is 215 feet, and, in the middle of it, there is a small doorway leading to a bye-lane.* The greater part of the north side is covered by the private residence of the Head Priest, but towards the north-east corner there is a large gateway with massive side pillars, and it now serves as the principal entrance to the temple enclosure. All pilgrims are expected to enter by this gate. The length of this side is 220 feet. All the above measurements have been taken within the enclosing walls. The whole of the area is paved with flags of chunar free-stone, the gift of a Mirzapur merchant, who spent a large sum on this pious work.

The principal temple stands on the centre of this area, facing the east, as old Hindú temples usually do. It is a plain stone structure, rising to a height of 72 feet on the slope. Its surface is cut into a check pattern by plain perpendicular and horizontal mouldings. When originally built it comprised a single cell 15′ 2″ × 15′, opening due east. A low porch or lobby, 35′ × 12′ divided into two aisles by a row of 4 pillars, was added sometime after, and a second porch, a little shorter, followed at a later date. Both the porches are paved with flags of basalt. The appearance of the façade is shown in the annexed woodcut, copied from a photograph. The woodcut does not show that the central opening is flush with the court-yard. The ends of the lobby are accessible by small doorways, which are reserved for the use of priests and respectable female pilgrims. The other three sides of the cell are faced by pillared verandas which are reserved for the use of those pilgrims who come to fast for days to secure special blessings from the divinity in the temple. On the east side of the northern veranda there is a masonry vat into which flows the water and milk used for the ablutions of the liṅgam. The water in it is of a dirty colour, being loaded with milk, sandal-paste, and washings of flowers,† which impart to it a fragrant



* Mr. Beglar's description of the gates is not correct. He says, "there are four entrances to it; the principal one is to the west, and a similar one is on the north. Of the two minor ones, one is on the north and one on the east," (p. 138). The east gate is the largest and the west one small. The second door on the north is the passage which leads to the Head Priest's residence which forms a part of the sacred premises, and cannot correctly be called an entrance to the courtyard.

† An emulsion of Bháng is often poured on the liṅgam, and occasionally Gánjá is put on its top, but I was told, that such things were not allowed to flow into the vat for fear of their injuriously affecting the pilgrims who drink the water.

smell, and is esteemed as highly sacred. Every pilgrim is expected to taste a few drops of it, and to carry away a phial full of it. I was informed that the water is bailed out of it from time to time, to prevent its becoming tainted by the putrefaction of the vegetable matter mixed with it. When I tasted it, I did not notice any fœtid odour.

The presiding divinity of the temple is the *Jyotirliṅga* or Vaidyanátha of the story cited above. It is of a cylindrical form, five inches in diameter, and rising about four inches from the centre of a large slab of basalt shaped like a yoni and pointing towards the north. Fixed firmly as it is in this slab, it is not possible to ascertain how much of the liṅgam is buried under ground. The top is broken, and has an uneven surface, one side being a little higher than the other side. The fracture is attributed by the Hindú legend to the assault of Rávaṇa, and by the Santál legend to that of the forester Byju; probably the real cause has to be looked for in the fanaticism of some iconoclastic Muslim. Daily pouring of water and milk by hundreds of pilgrims and repeated wipings after every offering, have smoothed the surface and made it even glistening, but the irregular fracture is prominently perceptible.

The cell is exceedingly dark, and, entering it after circumambulating the temple in the glare of the midday sun, one can see nothing in it; and two ghi-fed lamps are all that are held up to help the faithful in beholding the emblem of the divinity: one of them is kept burning all day. With the feeble light of the lamps, and after repeated washings, I noticed the liṅgam to be of a dull amber colour, mottled with black specks. The original colour was doubtless grey, but the washings with milk and frequent smearing with sandal-paste have given it a yellowish tinge, and the specks suggested to me the idea of the stone being granite. The cell contains no furniture of any kind, and the walls are bare and unplastered. One block of basalt on the top of the doorway, I was told, contained an inscription. But going up to it by a ladder and holding two torches by its side, I found the supposed writing to be mere chisel marks.

The lobby in front of the cell is, like the cell itself, paved with flags of basalt, but it contains nothing in the way of furniture or fixtures. There is, however, a small inscription on the left side of the entrance to the cell. This will be noticed lower down.

The second porch has, as shown in the woodcut, in front a row of pillars spanned by blocks of basalt. On the right side there is a sandstone image of a bull, which is by some dignified with the name of *Śríjuta* or 'his excellency.' Near it there are some small bovine images, and bells hang under the ceiling. Every pilgrim, entering by the front door, has to pull the bell-rope to announce to the divinity the approach of a devotee. In most cases the priests do the needful in behalf of the pilgrims. This rule is strictly enforced at the temple of Viśveśvara at Benares.

The ritual of worship is simple enough. The mantras are few, and the offerings limited. Pouring of water on the liṅgam, smearing it with sandal-paste, and the offering of flowers and a few grains of rice constitute the worship. This is followed by the offering of money in silver or gold, no copper being allowed to be brought in contact with the divinity. Rich people offer horses, cattle, pálkis, gold ornaments and other valuables, and sometimes rent-free land in support of the daily worship, the title-deed in such cases being ordinarily a bel leaf on which the donation is written, and the leaf is swept out in the evening. This deed, however, is more faithfully respected than many muniments on parchment. There is nothing here like the consecration of enormous quantities of dressed food and sweetmeats which obtains at Bhuvanes'vara, Puri, and elsewhere. The god delights in water, bel leaves, sandal and flowers, and they are all that are necessary for his worship. He is, however, very particular about the quality of the leaves and the water. The former has to be brought from the Trikuṭa Hill. For ordinary use the water of the sacred well, excavated by Rávaṇa, is held sufficient; but water from the sources of the Ganges on the Himálaya near Badrínáth, Sanskrit Badarínátha, or from the Mánasarovar lake in Tibet, is highly prized, and thousands of pilgrims, mostly hermits, bring it from those distant places. A great quantity is also brought from the Ganges near the Jaṅgirá rock.* Adverting to it, Mr. Montgomery Martin says, "but the great emolument of the priests arises from about 50,000 pilgrims who at various times come to carry away a load of water which they intend to pour on

* General Cunningham derives the name from that of a saint, and not from that of the Emperor Jahángir as some do. He says, "Here the course of the river is changed by two rocky hills; one called Jangíra, standing in the middle of the water, and the other called Báis-karan forming a bluff headland at the end of the stream. The former derives its name from Jahnu Rishi, who had established his cell or *A'śram* in a cleft of the rocks. Hence the rock itself was called *Jáhnavi gṛiha*, or "Jahnu's house," which was gradually shortened to Jáhngira, just as *Rája gṛiha* has now become *Rájgir*." (Archæological Survey Reports, XIV, p. 20.) This is a mere guess, and on the face of it not tenable. If the meaning be "Jahnu's house," the compound should be *Jahnu-gṛiha*, which would correspond with *Rája-gṛiha*, the first member of which is a noun. If the derivative form be accepted, the term should be *Jáhnava gṛiha*, the neuter noun *gṛiha* not admitting of a feminine adjective like *Jáhnaví* to qualify it, nor could the name of the saint be feminine. If the term be taken as a derivative feminine noun, the meaning would be the house of the river Ganges, and we would come to the absurdity of calling the rock the house of the river. If the word be spelt with a short final i in the derivative form, we create our giant *si* with the object of knocking it down immediately after without any object, and that against the ordinary rules of Sanskrit elision. The name originally was Jahnugiri or "the rock of Jahnu." Both *gṛiha* and *giri* would change into *gir* in the vernacular without any difficulty, and the context can alone determine the original term.

the head of various celebrated images in distant parts. In the south of India I have met pilgrims carrying their load from this place; but by far the greater part goes to Devaghar in Vírabhúm where it is poured on the Priapus or Liñga called Baidyanátha, to whom this water, taken from a scene of former pleasure, is considered as peculiarly acceptable."*

A special charge was formerly made for the offering of this water, and it was called *Gaṅgájali*. The priests now keep a supply of sacred water in phials to help such pilgrims as come without a supply. A few drops of this water are sprinkled on the flowers which the worshipper offers to the divinity. The water is described to be from Jangirá, or from Badarinátha, or from Mánasarovar according to the whim of the priest at the time.

The verandas on the north, the west, and the south sides of the temple are reserved for such pilgrims as repair to the asylum of the divinity for special blessings. Their daily number varies from 20 to 40, and they include both men and women from all classes of the community, from the richest to the poorest. The plan adopted to extort the blessings is curious. It is a sort of a distress warrant on the divinity, threatening him with the sin of murder if he should decline, and reminds one of the Brehon law of distress, under which a creditor who required payment from a debtor of higher rank than himself should fast upon him. In the ordinary affairs of life this law is well known in this country from an early date under the name of "sitting Dharṇá." At one time it was so prevalent that the British Indian Government felt it necessary to pass a special law, Regulation VII of 1820, to prohibit it. When one fasts on a god the word ordinarily used is *hatyá* or killing, for the resolution is to commit suicide by fasting, should the divinity implored decline to grant the favour sought. It is in fact *Dharṇá* under another name. The blessings sought are various. Ordinarily men fast for the cure of their diseases; women mostly for the cure of the ailments of their children, or for obtaining children. The usual practice is for a pilgrim to bathe in the Sivagañgá tank in the morning, worship the liñgam, and then to lie down on the bare pavement of the veranda till next morning, when he or she rises, performs his or her worship, drinks a mouthful of water from the vat on the north side, and then lies down again. This practice is continued for three days and three nights, in course of which the pleasure of the divinity is generally communicated to him or her in a dream. Sometimes the dream comes on the very first night, sometimes on the second or the third, and sometimes not at all; the dream, when vouchsafed, manifesting itself in such words as "Go away, you are cured;" or "Go, and do such and such things (naming them) and you will be cured;" or "You will be cured;" or "Your wish will be fulfilled in course of such a time"

* Martin's 'Eastern India,' Vol. II, p. 38.

(naming it). Should no dream come, it is understood that the person is too sinful and utterly unworthy of the god's mercy. Formerly the fasting was continued sometimes to seven, eight, or nine days, and dreams came on after such protracted fasting; but, some deaths having taken place from starvation, the priests do not now permit a longer fasting than of three days. The sight of these miserable beings on the third day is pitiful indeed. I once noticed a woman of about 30 years of age, lean and emaciated, who was too weak to walk from her place to the vat, and to have a drink of water, and had to be led thereto by her companion. It should be added, however, that this absolute fast is highly efficacious in many cases. Persons who had suffered for months or years from painful chronic diseases, which had made life a burthen to them, have returned home perfectly cured, while others have been greatly relieved. Nervous diseases, particularly hysteria, are often cured. And there are not women wanting who profess that they have been cured of their barrenness. One common complaint among Hindú women is that their children die young, so that they cannot have two sons living at the same time, and for this they sometimes fast at the gate of the lord, and are not unoften blessed. Of course there can be no statistics to show the percentage of cures, and it must be comparatively small, perhaps not more so than at Lourdes and other places in Europe, but it is sufficiently large to keep up a constant stream of pilgrims submitting to the fast. Some of those who are blessed have their names engraved on the pavement of the verandas, and there are a great many names so engraved. Formerly the pilgrims lay in the open courtyard, but about one hundred and fifty years ago the verandas were built to protect them from the sun and rain.

Leaving now the great temple, I must go over the courtyard to notice the minor sanctuaries. The terrace, marked No. 1 on the annexed plan,* (Plate XV) is used by paṇḍits on cold weather mornings for expounding the Sástras. It is also used for performing śráddhas.

No. 2 has been replaced lately by a large stone temple, which the present Head Priest has erected in honour of his father.

No. 3 is dedicated to the goddess Káli, a black stone image, similar to what is now prepared in Bengal to represent that divinity. The image is remarkably well executed. On the top of the door there is an inscription which gives the name of Harinátha Ojhá and the Samvat date 1700. A second inscription on a side gives a different date.

* I am indebted for this plan to Bábu Ráshabehári Dutt, Kanungo of Deoghar. He measured the temples without taking any angles, and the location of the different temples is, therefore, not absolutely correct. For all practical purposes, however, the plan is quite satisfactory. Since preparing it, I find Mr. Beglar has published one in the Archæological Survey Reports, Vol. VIII.

No. 4 is dedicated to the goddess Annapúrṇá, 'the great almoner.' It too has an inscription.

No. 5 is the sacred well *Chandrakúpa*,* the repository of the holy waters of all the sacred pools on earth, which Rávaṇa is said to have excavated to relieve himself of the necessity of daily bringing water for worship from the Himálaya mountains. It is very awkwardly situated, right in front of the main entrance to the courtyard. The parapet round the well is of an octagonal form, and is kept in such good repair, with the plaster often renewed, that it is impossible to judge of its age from its appearance or make. The water is very good and clear, and that would suggest the inference that much sediment cannot have accumulated at the bottom. It is largely used both for the daily service of the temples and for drinking purposes by the people of the neighbourhood.

No. 6 is an unfinished temple. Mr. Beglar describes it at some length. He says:

"The finest of all the temples is the unfinished temple D; this, from the plan, is seen to be a single cell, once surrounded on all sides, now on three sides only, by pillars, which supported the roof of a veranda all round. From an examination of the pillars, however, it is clear that they formed no part of the original design, as they differ among each other in form, in size, in execution, and in position with reference to the central building, the pillars being not at a uniform but at varying distances from the walls on the various sides; these pillars further shew that the enclosure wall is a later addition even than themselves, as one of the pillars is imbedded in the eastern enclosure wall.

"Divested of its pillars, this temple is seen to be a single cell, surmounted by a tower roof; it is ornamented externally by plain raised bands of mouldings; these are neither elegant nor bold, and are situated so high up, leaving such a height of bare blankness below, as to look quite out of place. Below, the corners are indented and sculptured into plain rectilinear mouldings by way of ornament; this process has the effect of making the corners look particularly weak, and, but for the veranda, which now acts a friendly part, by breaking up the height, and shutting off as it were the main tower from the basement portion, the error of the proceeding would become painfully evident. * * *

"The tower does not diminish with a graceful curve, but slopes upwards from above a certain point in almost a straight line. The knee or

* गङ्गादिसर्व्वतीर्थस्य जलेनैव प्रपूरितं।
चन्द्रकूपं च तन्नाम विदितं प्रीतिपूर्व्वकं॥
वैद्यनाथ- मा॰ ५ अ॰।

point of intersection of the vertical lower portion and the inclined upper tower portion is so little rounded as to be painfully prominent, and prominent too in such a way, as to shew that the architects really did not know how to deal with it; they had not the courage to leave the line sharp, and bring it out by a bold moulding, and they had not the taste to round it gracefully.

"The form appears to be a compromise between the Muhammadan dome of the early type, *i. e.*, without a bulge, and the Hindu spire; if a semicircle be described on the top of the vertical portion of the tower, and if on the semicircle so described a triangle, whose base is less in width than the diameter of the semicircle, be slipped, till the lower extremities of its sides rest on the curve of the semicircle, we shall get a form that nearly approaches that of these towers."*

Elsewhere he says, "I have described but one of the temples in the enclosure, that is, the best of the group, and may be regarded as the type of the others."†

These disquisitions about art and compromises and types are, however, thrown away. The temple is not a finished work of art; as we now see it, it is the result of an accident, and no general deductions can be drawn from it. It is, moreover, singular in appearance, and cannot have served as a type for any other. It is well known to the people that the temple was undertaken by Vámadeva Ojhá, an early ancestor of the present Head Priest, with the ambitious object of erecting a temple of larger and nobler proportions than the abode of Vaidyanátha, and to dedicate it to Lakshmí-náráyaṇa, thereby making the Vaishṇava divinity outshine the Sivite lord, even in his own stronghold. The plans were settled with this object in view; the plinth was to be 6 feet high, the fane of Vaidyanátha having no plinth at all; the exterior dimensions were fixed at 37 feet by 35 feet, those of Vaidyanátha's temple being 22′ × 21′; the altitude was to have been 120 feet against Vaidyanátha's 70 feet. The work was commenced accordingly; the plinth was completed, and the main building carried to a height of 51 feet, when Vaidyanátha appeared to the presumptuous priest in a dream, and threatened dire retribution if the heterodox idea should be any further pushed on. None could disobey so dreadful a threat. The original idea was abandoned, and the works were stopped at once. To prevent, however, the unsightly walls remaining standing as a monument of folly, a flat roof, 21 feet square, was put on, and the walls somehow plastered. The verandas on the west and the south sides were at a later time covered in, but not on the north and the east sides, though the plinths on those

* Archæological Survey Reports, VIII, pp. 139-8.

† Ibid, p. 142.

sides had been built and the pillars set up. In the annexed plan, the roofed portions alone are shown.* The fact mentioned by Mr. Beglar that one of the pillars juts into the surrounding wall should show that the wall dates from a later time ; but the unequal and irregular width of the verandas and their unfinished condition, supported by the belief that they were added subsequently, may well suggest the idea of the wall being of an earlier period. The base of the temple and the boundary wall existing, the width of the verandas had to be regulated according to the space available.

It would seem that no image had been prepared when the temple was taken in hand, and, when the crisis arrived, it was out of the question to think of a new image. But the temple having been roofed in, something had to be put in it, and we now find three images of Vishṇu on the throne which had been designed for one image, that of Lakshmí-náráyaṇa. The images are loosely propped against a wall behind the masonry platform, instead of being fixed by their bases. They are in alto-relievo, each representing a four-handed human figure standing on a lotus throne. They are of unequal size. The largest image is 3′-6″ high, the next 2 feet, and the last 1′-6″ ; and they have apparently been brought away from some old temple, for they have been injured by the removal ; parts of the back-frame have been broken and other parts chipped off.

No. 7 belongs to Ánanda-bhairava, who is represented as a human being, lifesize, squatting on a lotus seat, and engaged in meditation. At first sight one is apt to take it for a Buddha in meditation. The temple was undertaken by Ánandadatta Ojhá, but he did not live long enough to finish it. His son Paramánanda did not care for it, but his grandson, Sarvánanda, completed it in A. D. 1823.

No. 8 is a vat or well, situated right in front of the last. It is assumed to represent the two rivers Ganges and Yamuná, and named accordingly.

No. 9 is situated to the south of No. 7, and is dedicated to the images of Ráma, Lakshmaṇa, and Jánakí. The images are very modern, and call for no remark. The temple was built by Rámadatta Ojhá in the 9th decade of the last century.

No. 10 is the vat wherein flow the waste waters of the great temple, and afford the only sustenance which the pilgrims derive during their rigorous fasts.

No. 11 is the great temple already described.

No. 12 is a flat-roofed temple with a small porch. It contains a liṅgam which has the distinctive name of *Nílakaṇṭha* or the ‘ Blue-throated.’

* In the plan annexed to Mr. Beglar's note in the Archæological Survey Reports, Vol. VIII, all the four sides are shown.

The story is that, on the occasion of the churning of the ocean by the gods and the demons, a large quantity of poison was evolved which threatened immediate destruction to the churners, and to save them, Siva quaffed off the lethal draught, which stuck in his throat, and caused a blue or black mark to be apparent on it.

No. 13 is dedicated to Párvatí, the consort of the presiding divinity in the great temple, and the eternal union of the two is indicated by a piece of cloth tied by the two ends to the pinnacles of the temples, stretching from one to the other, a distance of about 70 feet. The temple is well built, and stands on a plinth about 8 feet high. On the centre of the cell there is a masonry platform on which are placed two black stone images of unequal size, one a four-handed standing female 1′-6″ high, and named Gaurí, 'the fair one,' the other, eight-handed, standing behind a buffalo which she is destroying; the latter is 14 inches in height and named Párvatí, 'the mountain born.' Both are slightly chipped in some places. They have apparently been brought from some old temple or other, and not made expressly for the fane in which they are now placed. They are held in the highest veneration, and offerings of sweetmeats and other articles are made to them in large quantities. During the three days of the Durgá-pújá, in October, upwards of a thousand kids are sacrificed to their honour besides several buffaloes. Vaidyanátha dislikes these offerings, and is averse even to look at them, and the door of his temple is therefore closely locked during the time the sacrifices are made. This temple was built by Ratnapáṇi Ojhá at the beginning of the last century.

No. 14 belongs to Vagalá Deví or Vagalámukhí. It was built by Rámadatta Ojhá, between 1782 and 1793 A. D. The goddess is said to be one of the ten forms of Durgá known under the common appellation of Mahávidyá. According to some Tantras she is four-handed; according to others, two-handed. Her *dhyána* pictures her as a female of grave appearance, excited with wine, bright as gold, four-handed, three-eyed, amorously disposed, holding a short club and a lasso in her right hands, and a tongue and a thunderbolt in her left hands, arrayed in a yellow garb, and decorated with golden earrings, her breasts hard and close, and she is seated on a golden throne."* Her peculiar habit is to seize her enemy by the tongue and then

* गम्भीराञ्च मदोन्मत्तां स्वर्णकान्तिसमप्रभां।
चतुर्भुजां त्रिनयनां कामलालसमानसां॥
मुद्गरं दक्षिणे पाशं वामे जिह्वाञ्च वज्रकं।
पीताम्बरधरां देवीं दृढपीनपयोधरां॥
रत्नकुण्डलभूषाञ्च स्वर्णसिंहासनस्थितां।

Rájá Rádhákánta's Supplement to his 'Śabdakalpadruma,' p. 1258.

break his skull with her club. She is the presiding divinity of a great many malevolent incantations.

No. 15 is a small temple, built by Rámadatta Ojhá, apparently from materials obtained from an old shrine, for, on the architrave of its porch, there is an inscription in the old Lát character. The presiding divinity is named *Súrya* or the sun-god, but the figure, as I saw it, is that of the Buddhist Padmapáṇi, 2 feet in height, and there is on the base of it an inscription beginning with the words *Deya dharmoyam* in the Kuṭila character, which leaves no doubt as to the personage the image was originally intended to represent. Nor is this a singular instance of the adoration of a Buddhist image under a Hindú name. Indian antiquarians have noticed instances of the kind in almost all parts of India. There is a Bengali inscription on the porch of this temple.

No. 16 holds an image of Sarasvatí, a daughter of Mahádeva, and patroness of knowledge. Both the temple and the image are insignificant, and held in little respect.

No. 17 is an open veranda, originally intended for the shelter of pilgrims and hermits, but now used as the repository of several images of different kinds picked up from distant places. The largest image is that of the monkey-general of Ráma, and the temple is named after him Hanumán Kabir.

No. 18 is dedicated to Kála-bhairava, a form of Síva, but the image is of a very suspicious look. I should have taken it for a Dhyání Buddha had I seen it in a Buddhist temple, and putting it beside Súrya *alias* Padmapáṇi there need be no doubt about its character. It is 3′-6″ in height.

No. 19 is the sanctuary of Sandhyá Deví, the goddess of Vesper. She is also called Sávitrí Deví, the wife of the Sun. Her first name was Tárá Deví, a name well known among Buddhists. Her image, as seen in the temple, is that of a fierce-looking female seated on a car drawn by horses, but the car and horses are broken and smudgy. The temple was built by Kshemakarṇa Ojhá in 1692 A. D.

No. 20 has for its presiding divinity an image of the elephant-headed Gaṇeśa. It is very little cared for. It was built by Rámadatta Ojhá (circa 1782-1793).

No. 21 is a veranda with two ranges of pillars, and originally intended, like No. 17, for the use of pilgrims. It has now some images set up by hermits. The two principal images are Śyáma, a form of Kṛishṇa, and Kártikeya, son of Síva.

No. 22 is the eastern gate with a pavilion on top, and intended for musicians, but not in use now.

No. 23 is the two-storeyed Nuhbat-kháná or music-room noticed above, and now in use.

In Captain Sherwill's 'Survey Report on Birbhum' it is stated that "all the temples but three are dedicated to Mahadeo; the remaining three are dedicated to Gauri Párvati, his wife," and this has been quoted in Dr. Hunter's 'Statistical Account of Bengal,' Vol. XIV, p. 324. The details above given will show that such is not the case.

The road leading from the northern gate of the great temple passes along the western edge of a large lake, called *Sivagaṅgá*. The lake measures about 900 × 600 feet, having, in November, when I saw it, about 13 feet of water. The water is of a greenish colour, and held to be impure, though largely used for bathing purposes. The lake forms part of a large tract of low-land or ravine, the western portion of which has been cut off by a heavy embankment, on the top of which runs the road aforesaid. This embankment must have been put up by Mahárájá Mána Siñha, the great general of Akbar, who came to this place on his way to Orissa, as I find his name is associated with the western portion, which is called *Mánasarovara*. This portion has silted up greatly, and, except during the rains, remains dry. It is connected in a roundabout way with the lake by a small rivulet named *Karmanáśá*, which is described to be the spot where Rávaṇa eased himself, and its connection with the lake makes the water thereof impure. The drainage of this portion is discharged into the Yamunájor which runs at some distance to the west.

To the north of the hollow aforesaid there is a small spot of low land which forms the cremation ground of the town. And to the north of it and of the lake stands the forest which forms the northern boundary of the town.

To the south-west of the temple courtyard, on the south side of the main road, there are two small temples with a terrace in front, six feet high, and set off on the upper edge with a trefoiled moulding. On the top of this occurs a stone structure which has been thus described by Captain Sherwill, in his 'Survey Report on Bírbhúm': "At the western entrance to the town of Deoghar is a masonry platform about 6 feet in height, and 20 feet square, supporting three huge monoliths of contorted gneiss rock of great beauty; two are vertical, and the third is laid upon the heads of the two uprights as a horizontal beam. These massive stones are 12 feet in length, each weighing upwards of seven tons; they are quadrilateral, each face being 2 feet 6 inches, or 10 feet round each stone." (These measurements are wrong. The uprights are 12 feet high, having each face 1′ 6″ broad, or 6 feet in the round. The cross piece is 13 feet long, and 1′ 9″ inches broad on each side. The weight must be propotionately reduced.) "The horizontal beam is retained in its place by mortise and tenon. By whom, or when, these ponderous stones were erected, no one knows. There is a faint attempt at sculpture at each end of the vertical faces of the horizontal beam,

representing either elephants' or crocodiles' heads."* Dr. Hunter calls these "the three great stones which their (the Santáls') fathers had worshipped, and which are to be seen at the western entrance of the holy city to this day."† Bábu Bholánáth Chunder dissents from this opinion. He says: "It is evident that Mr. Hunter has written from hearsay, and not from actual local observations. His 'beautiful highland lake beside which the holy city stands,' is no more than a large artificial tank like the Lál Dighi. The 'three great stones'—'two vertical, and the third laid upon the heads of the two uprights as a horizontal beam'—supposed by him to be relics of aboriginal worship,—are at once made out by Hindu eyes to be no more than a Hindu *Dolkát-frame in stone*, with *makara* faces at the extremities of the horizontal beam, which is used for swinging Kṛishṇa in the *Holi* festival. The rude Santhals, who can yet build no more than a thatched cabin, and who depend for all their iron-work and instruments upon the Hindu blacksmith, are not the people to have fashioned the stone into well-edged slender pillars, or cut the mortises and tenons in which is retained the horizontal beam, or carved the elegant *makara* faces at its extremities."‡

The argument about the primitive races not being able to carve large stones is open to question. There are huge stones and carved colossal monoliths in different parts of the earth which are attributed to persons who certainly were not much more civilized than the Santáls of the present day. It is, however, not necessary to enter into this question here. Certain it is, the gallows-like structure is not peculiar to this place, nor has it any connection with the Santáls, who do not now worship it, nor is there any reason to suppose that they ever did so. There is nothing to show that the Santáls were in the habit of worshipping a stone scaffold like the one under notice, and certain it is that in no part of Santália, and indeed in no part of India inhabited by the black races, is there a stone gallows to be seen, which would justify the assumption that such a structure was ever an object of worship. Had any religious sanctity been attached to it, it would have been seen much more abundantly than what appears to be the case. The terrace in front of the temples, however, settles the question as to the use of the gallows. In every part of India where the Kṛishṇa cultus has found access, such gallowses are invariably seen in close proximity of ancient temples. Of course where stone is scarce, wood is generally used to make the scaffolding, but where stone is available it is always preferred. A remarkably handsome structure of this kind will be seen in plate XXX of my 'Antiquities of Orissa,' Vol. II. It is regularly

* *Apud* Hunter's 'Statistical Account of Bengal,' Vol. XIV, p. 325.

† 'Annals of Rural Bengal,' p. 192.

‡ Mookerjee's Magazine, Vol. II, pp. 26*f*.

used at Bhuvaneśvara for the purpose of setting up a swing during the swing festivals. At Puri there is a similar structure to the north of the great temple, and used for the same purpose. Innumerable other instances may be easily cited, but they are, I think, not wanted. In my own house there is a wooden structure for hanging the swing for my family divinity, and almost every old family in Calcutta can produce samples of it.

Mr. Beglar had not, evidently, read Dr. Hunter's work when he wrote his report on Vaidyanátha, and his idea is that the gallows represents a gateway. He writes: "There is, however, one object that must be excepted: this is a great gateway consisting of two pillars spanned by an architrave; this is clearly the remains of some great ancient temple, which has entirely disappeared, leaving its outer gateway alone standing. I infer it to have been an outer gateway from its resemblance in all essentials to the great outer gateway of the temple at Pathári in Central India; like it, it stands entirely isolated, and although the pillars are plain rectangular ones, and have not the elaborate sculpture and the graceful statues that adorn the example at Pathári, there is nevertheless about it an air of impressiveness that takes it out of the commonplace. I could not obtain access to it, but was obliged to content myself with a distant view; it is situated on a small raised spot entirely surrounded by private huts; at present it is known as the *hindolá*, or swing, and at a certain festival the statue of Kṛishṇa is brought and made to swing beneath it."* The terrace, six feet high, on which the pillars are fixed, is sufficient to show that the gate theory is not at all tenable. No one in his senses would have thought it proper or convenient to have a terrace six feet high to block his principal gateway. It might be said that the terrace is a subsequent addition, but to prove this, one must dig into the terrace, and show that the stones are buried below the level of the surrounding ground. Mr. Beglar had got the right information, but he failed to utilise it. I cannot make out how he found any difficulty in coming near the pillars, for they stand right on the side of a public highway, and are easily accessible to all comers.

On the north side of the road, a little to the west of the pillars, there is a small square chamber with a pyramidal roof, which has a plain tomb in its middle, and this is said to contain the mortal remains of Vaiju. The building cannot be two hundred years old, and there is nothing in it to show that it is in any way connected with the alleged discoverer and breaker of the liṅgam which bears his name. In fact the name is an old one, and applied in the Puráṇas to the liṅgam of Śiva in very distant parts of India. It is often applied to Dhanvantari, the oldest Hindú surgeon. It means the "lord of medicine," and Śiva is the great lord of all herbs. The

* Archæological Survey of India, Reports, Vol. VIII, p. 128.

Śiva Puráṇa explains the name to mean 'he who had been worshipped by two physicians' (Vaidyas,* the two Aśvins). It should be added, however, that the Padma Puráṇa recites, in one place, that part of the Santál legend which accounts for the name of Vaidyanátha from that of Vaiju or Vaidya,† and provides for the contradiction by saying that the Bhilla of the second age was born as Vaiju in the present or Kali age, and from that time the name got currency. The *Vaidyanátha-máhátmya* of the Padma Puráṇa, as I have it in print, is, however, of doubtful authority; it names most of the temples, some of which are under 150 years of age, and, even if we rejected those parts as interprolations, the age of the work cannot be carried very far back, while the name of Vaidyanátha is unquestionably old.

To turn now to the inscriptions.‡ The most important record in connexion with the history of the principal temple is the one which occurs in the lobby of that temple, on the left hand side of the doorway. It is engraved in the Nágarí character on a sandstone slab 2'3" × 1'3," and comprises five lines of matter. The letters measure each 2 inches in height. The language is Sanskrit, and the text runs thus:—

No. 1.

अचलशशिशायकेक्षसितभूमिशाकाब्दके
वलति रघुनाथके वह(ऊ)लपूजके श्रद्धया।
विमलगुणचेतसा नृपतिपूरणेनाचिरं
त्रिपुरहरमन्दिरं वरचि सर्वकामप्रदं।
नरपतिकृतपद्यमिदं।

* वैद्याभ्यां पूजितं सत्यं लिङ्गमेतत् पुरातनं।
वैद्यनाथमिति ख्यातं सर्वकामप्रदायकं॥
Śiva Puráṇa.

† एवं भिल्लाभिधेयोपि जात्यावोधो हरप्रियः।
कलौ जन्म समासाद्य वैद्यनाम्ना भविष्यति॥ ५८॥
रावणेशं समाराध्य लब्ध्वा भक्तिपुरःसरं।
ततः प्रसन्नस्तं प्राह वरं ब्रूहि महामते॥ ५९॥
वैद्यनाथेति नामेदमुवाच प्रणतः सुधीः।
अद्य प्रभृतितन्नाम्ना तव नाम भविष्यति॥ ६०॥
वैद्यनाथेति नामेदं विवारं ये स्मरन्ति वै।
भक्तिमुक्ति सदातेषां करगे भवति ध्रुवं॥ ६१॥

‡ Impressions from all the inscriptions noticed here are preserved in the Library of the Asiatic Society. They are not of sufficient importance to justify the publication of their facsimiles.

Translation. "In the Saka year of mountain [8], moon [1], arrows [5], and earth [1, or Saka 1518 = A. D. 1596], at the request of Raghunátha, through good-will towards numerous worshippers, this temple, designed for the destroyer of Tripura and (itself) the giver of all blessings, was quickly erected by king Púraṇa of pure mind and untarnished qualities.

This stanza is the composition of the king."

As a piece of royal composition this poem is not fit subject for criticism; but the word *balati* in the second line is not Sanskrit, in the sense in which it has been used here. There is an error of spelling too, but it is due to the engraver. The name of the king in full is Púraṇa Malla, a chief of Gidhaur, said to be (but obviously incorrectly) the 9th in a direct line from Víra Vikrama Siñha, who founded the Gidhaur house in A. D. 1167. The fifth from Púraṇa obtained the title of Rájá from the Emperor Shah Jahán in 1651. Gopála Siñha, the 19th from the founder, was the reigning chief when the English took Bihár. Mr. Beglar has failed to read the name, and says, the record "mentions the name of some king with the title of Nripati. Raghunátha's name also occurs in the last line" (p. 140). The name of Raghunátha occurs in the 2nd line, not in the last.

No. 2.

The story runs that the above inscription was forcibly put up by Púraṇa Malla after causing certain repairs to be done to the temple to mark his supremacy and ownership of the surrounding land, including the property called Táluk Deoghar, which he had taken from its former owners. It might be that the chief did more than mere repairs. The lobby is unquestionably of a later date than the temple itself; and the chief probably caused it to be erected to improve the temple. Anyhow, the priest Raghunátha Ojhá, whose name Púraṇa Malla recites, was not at all pleased with the inscription; but, unable to resist the chief, bided his time, and when the chief was gone, caused the porch to be erected and therein set up his own inscription. Tradition has it that the priest fasted for some days at the gate of Vaidyanátha who in mercy revealed to him in a dream that he should build a new porch, and set up an inscription; but he claims the credit of having erected the temple. The record is, like the last, in Sanskrit language, but inscribed in the Bengali character. It extends to 13 lines, each nearly 4 feet long. The letters are about an inch in height. The following is its transcript in the Deva Nâgarí character:—

चन्द्रविम्बप्रतीकाशं प्रासादं चातिशोभनं ।
हरिद्रापीठके कर्त्तुं कामोऽस्मिन्नभवन्मुनिः ॥ १ ॥
न चैतन्मानुषं कर्म्म चोलराज महामते ।
भविष्यति न सन्देहः कदाचिच्च कलौ युगे ॥ २ ॥

मुनेः कल्याणमित्रस्य पार्थस्य च महात्मनः ।
संवादं शृणु राजेन्द्र इतिहासं पुरातनं ॥ ३ ॥
यदाकदाचिच्च कलौ रामांशेन द्विजन्मना ।
कारयेद्वै मठवरं रावणेश्वरकानने ॥ ४ ॥
स्वयं दाता समागत्य प्रोद्घिय मठकूवरं ।
स करिष्यति यत्नेन प्रच्छन्नोनरविग्रहः ॥ ५ ॥
आयतं शतसाहस्रमस्मिन् लिङ्गे प्रतिष्ठितं ।
वस्त्रकुलस्य तल्लिङ्गं वेदिकोपरि चोत्थितं ॥ ६ ॥
यथोर्द्धशिखराकारं योजनार्द्धं सुविस्तृतं ।
लक्षलिङ्गोद्भवं पुण्यं पूजनात्तस्य जायते ॥ ७ ॥
ब्रह्मना पद्मनाभेन वञ्चितस्तु दशाननः ।
रक्षणाय च देवानां दैत्यानां वैश्वधाय च ॥ ८ ॥
कैलासशिखरे देवी यदा मानवती सती ।
तस्मिन् काले दशग्रीवं द्वारस्थोनन्द्यवारयत् ॥ ९ ॥
दोर्भिर्जघ्राह शैलेन्द्रं सिंहनादं चकार सः ।
तेन सन्त्रासिता देवी मानं तत्याज भाविनी ॥ १० ॥
तस्मिन्नुपरते शब्दे जहास परमेश्वरः ।
व्रीडामवाप महतीं दशग्रीवं चुकोप सा ॥ ११ ॥
अत्यन्तप्रीतिमना भूत्वा दैत्यराजाय वै पुरा ।
एवं वरं ददौ शम्भुर्लङ्कागमनकारणं ॥ १२ ॥
तिस्रः कोट्योऽर्द्धकोटिश्च देवाः सन्त्रासमाययुः ।
स्मरन्ति देवीं सम्भूय कालरात्रिस्वरूपिणीं ॥ १३ ॥
कामरूपं परित्यज्य सा सन्न्यासमुपागता ।
हरिद्रापीठमासाद्य वशक्रे दशाननं ॥ १४ ॥
एतस्मिन्नन्तरे राजन् द्विजरूपधरोहरिः ।
दृष्ट्वा तु तल्लिङ्गं क्षणमात्रं स्थितस्तदा ॥ १५ ॥
प्रस्रावं कर्त्तुमारेभे यावदण्डं दशाननः ।
तावत् स विप्रस्त्वरितोलिङ्गं तत्याज भूतले ॥ १६ ॥
करतलनिभिरकर्षद्वैकवारं द्विवारं त्रितयमपि गृहीत्वा कुण्ठिता तत्र शक्तिः ।
करकलितशिरोग्रं जीवितान्ते तुरीयं दशवदनभुजानां जातमन्युर्बभूव ॥ १७ ॥

मुषिक इव तटस्थः सोऽर्थसिद्धेर्निरस्तः स्मरजिदथ निषन्नः सप्तपातालविद्धः ।
त्रिदशयुवतिभाले दत्तमन्दारमालोदशवदननिकारी प्रादुरासीदयोध्यां ॥ १८ ॥
गते कियति काले तु रावणं भक्षितुं नृप ।
निमित्तं राममासाद्य जहास परमेश्वरी ॥ १९ ॥
नातः परतरं स्थानं गुह्यमुक्तन्तु शम्भुना ।
चतुरस्रं क्रोशमितं चतुष्किष्कुसमुच्छ्रितं ॥ २० ॥
यदा यदा भवेद्ग्लानिः स्थानेऽस्मिन् मनुजाधिप ।
तदा तदा चावतरेद्रामः कमललोचनः ॥ २१ ॥
यस्यैषा मानिनी देवी मातेव हितकारिणी ।
स एव रामोविज्ञेयो मठं कारयिता च यः ॥ २२ ॥
श्रीवैद्यनाथचरणाब्जमधुव्रतेन विप्रावतंसरघुनाथगुणार्णवेन ।
प्राप्य प्रसादम + + + मिदं व्यधायि + प्रासादसेतुवनवारिमठादि सर्व्वं ॥ २३ ॥

Translation. "The sage desired to erect on the Haridrá-píṭha (an old name of Deoghar) a magnificent edifice, resplendent as moonlight. O wise king of Cholas, such an edifice could not be the work of man, but doubtless it will be accomplished some time in the Kali age. Listen, O king, to the ancient history of the noble-minded sage Kalyána-mitra Pártha, who, born as a Bráhmaṇa and pertaining a portion of Ráma, will some day in the Kali age, build an excellent Maṭha in the forest of Rávaṇeśvara. Himself the donor, he will diligently cause the foundation to rise forth—he a godly being in the guise of a man. There he will establish the liṅgam measuring a hundred thousand (*yojanas*), but rising only eight fingers on the altar. Its top is like the crest of a mountain spreading over half a yojana. By worshipping it one obtains the merit of worshipping a hundred thousand liṅgams. (It had been obtained) by Padmanábha (Vishṇu) craftily from the tenheaded (Rávaṇa) for the preservation of the gods and the overthrow of Daityas.

"At a time when the chaste goddess was in a sulky mood on the Kailása mountain, there came to the gate the ten-necked (Rávaṇa) who, on being prevented by Nandi (from entering the palace), seized with his hands the noble mountain, and burst forth in a lion's roar. Frightened by the noise, the wanton Deví at once gave up her sulks. The great lord laughed on hearing the noise. The lady was abashed greatly at this, and felt annoyed with the ten-necked. S'ambhu, graciously disposed, blessed the king of Daityas with the promise for removal to Laṅká. Three and a half koṭis of Devas were seized with fear, and in a body sought with prayer the shelter of the Deví of the form of Kálarátrí. Forsaking her bewitching

form, she manifested herself as Vesper (Sandhyá) and, taking her seat at Haridrá-píṭha, subjugated the ten-headed. At this time Hari, assuming the form of a Bráhmaṇ, took the liṅgam in his hands (from those of Rávaṇa), and waited for a moment. The ten-headed was engaged in relieving himself for a daṇḍa (24 minutes), and in the meantime the Bráhmaṇa dropped the liṅgam on the earth (and disappeared). He (Rávaṇa) tried once, twice, and thrice to take it with his hands, but his strength failed him. Failing for the fourth time after a final effort, the ten-headed lifted his hands to his head, and felt disgusted with his arms. Desisting from exerting for his object, he stood aside like a mouse, and the overpowerer of Cupid sat firm, penetrating down to the seventh infernal region.

"After a time, O king, he who overcame the ten-headed, who conferred chaplets of Mandára flowers on the heads of celestial damsels, was born in Ayodhyá, and the supreme goddess smiled at seeing in him her tool for the overthrow of Rávaṇa.

"There is no place greater or more secret than this, said S'ambhu; it is two miles square and four cubits high. As often as, O lord of mortals, distress obtains in this place (region), so often does Ráma, the lotus-eyed, descend in incarnation. Verily is this haughty goddess beneficent to him like a mother. He verily should be known to be Ráma who will cause this temple to be made.

"By the noblest Bráhmaṇa Raghunátha, the ocean of merit, the bee on the lotus feet of the auspicious Vaidyanátha, with the grace of ——— has this ———been erected,———the palace, the bridge, the grove, the waters, the maṭha and all."

The shrewd priest, it will be noticed, has taken shelter of distorted Puránic legends and ambiguous references to palaces, gardens, bridges, &c., to avoid directly contradicting the powerful chief of the land, and, by a play upon the meaning of his name, has allied himself with Ráma, of whom he claims to be an incarnation. He had acknowledged the aid of the conqueror at the close of the record, but the name of the conqueror has since been obliterated after the word *prasáda* 'grace.' This has obviously been deliberately done. I cannot make out to whom reference is made as the "wise king of Cholas." Mr. Beglar says, the inscription "records the erection, or rather I consider the repairs, of a temple by one Sri Vaidyanátha Mahamyáma. This name and also the name of one Raghunátha occurs in the last line."*

No. 3.

The inscription, on the right hand side pier measures 18 × 7 inches, and comprises 7 lines in the Maithila character. It run thus:—

* Archæological Survey Reports, VIII, p. 140.

१। शाला समुद्रान्तवसुन्धरायाः यष्टाश्वमेधाश्वमहाक्रतूनाम्। आदित्यसेनः प्रथितप्रभा-

२। वोबभूव राजाऽमरतुल्यतेजाः॥ माघ्यां विशाखापदसंयुतायां क्षते युगे चोलपुराद-

३। पेत्य (दुपेत्य) महामणीनामयुतत्रयेण चिक्षेपचामीकरटङ्ककेन॥ दृष्ट्वाश्वमेधचित-

४। येन दत्त्वा तुलासप्तकं हयकोटियुक्तम्। श्रीकोषदेव्या सहितोमहिष्या अचीकरत् को-

५। त्तिमिमां स सर्व्वाम्॥ कृत्वा प्रतिष्ठां विधिवद्द्विजेन्द्रैः स्वयं यथा वेदपथं नरेन्द्रः।

कल्याणदे-

६। तोर्भुवनत्रयस्य चकार संख्यां हरेः स एव॥ स्थापितोबलभद्रेण वराहोभुक्तिमुक्ति-

७। दः। स्वर्गार्थं पितृमातृणां जगतः सुखहेतवे॥ इति मन्दारगिरिप्रकरणम्॥

Translation. Adityasena of great renown, the ruler of the earth to the verge of the ocean, the performer of the horse and other great sacrifices, became king. His vigour was as great as that of the immortals. In the Kṛita age, issuing forth from the Chola metropolis, after performing the horse-sacrifice three times, giving three lakhs and thirty thousand golden coins to great sages, performing the Túla ceremony a thousand times over, during which he gave away a krore of horses, he, jointly with his queen Koshadeví, performed this noble deed. Having consecrated it through noble Bráhmaṇas, the king himself laid down the divine road for the good of the three worlds by establishing this abode of Nṛihari. This Varáha, the giver of enjoyment and salvation, was established by Balabhadra, for the translation of his parents to heaven, and for their welfare on the earth. This is the chapter on Mandáragiri."

The purport of this Vaishṇavite inscription shows that it has been brought away from the Mandár hill, where Balabhadra, a Chola king, had dedicated images of the boar and the man-lion incarnations, and stuck up here as a curiosity. It has no connection with the temple of Vaidyanátha.

No. 4.

The temple of Káli has two inscriptions, one over the doorway, and the other on the left hand pier. The former comprises five lines in relief Nágarí letters, each over two inches in height, and divided into two portions by a perpendicular line in the middle. The left hand portion gives some dates, and the right hand portion the name of Harinátha. The purport of the record is not very clear. It appears in the form of a prophecy. Reading the record along with No. 5, I am disposed to think that the temple was undertaken by Harinátha in 1643, and completed by Jayanáráyaṇa in 1712 A. D.

१ । विन्द्वाकाशर्षिचन्द्राब्दे माघे

२ । चतुर्द्दशीसिते चैकत्रिंशन्म-

३ । ठ० ग्रन्थ० कुर्य्याः पुष्कर इति श-

४ । तम् ००१०० संवत् १७००

५ । माघसुदि + + तिपा ००

Translation. In the year of dot (0), the sky (0), the rishis (7), and the moon (1 = 1700 and corresponding to the Christian year 1643), in the month of Mágha, on the 14th of the waxing moon, made 31 maṭhas ... Pushkara. On hundred ... 100 ... Samvat 1700, Mágha, waxing moon.....

The first date is obviously the Samvat year which is next repeated in figures. The date corresponds to A. D. 1643.

The right hand portion.

१ । चाज्ञा श्रीवैद्यनाथस्य

२ । कालिकाया मठस्थिते

३ । राजगुरुश्च राजेन्द्रोभ-

४ । विष्यसीति वर्णिनि

५ । नाम्ना श्रीहरिनाथब्रह्मणा

Translation. By order of Vaidyanátha, in this maṭha of Káliká, thou, O Brahmachári, shalt become, under the name of Harinátha Bráhmaṇa, a royal priest and noble king (*Rájendra*)." Mr. Beglar says the date is scratched out after the word Samvat. It is not so.

No. 5.

This is the second inscription in the temple of Káli. It comprises nine lines in Nágarí letters, and runs thus :—

१ । स्वस्ति———————————भगवती——प्रो————

२ । ——————रविन्दवरणा——स्तुत्या विरिञ्च्यादिभिः । तस्याः

३ । सुन्दरमन्दिरं हि विलसत् सर्व्वार्थदं चाकरोद्विप्रः शम्भुसमर्च्चकोज-

४ । यपुरोनारायणोनामतः ॥ श्रुतिशिखिरसविधुगणिते शकनरपतिव-

५ । त्सरे माघे । जयनारायणशर्म्मा व्यरचयदिदं हासितं भवनं ॥ तस्याः प्रसाद-

६ । मासाद्य प्रासादं रुचिरं मतं । व्यरचन्माघशुक्लायां दशम्यां सौरवासरे ॥

७ । भौमं सुन्दरमन्दिरं यदवधि प्रादुर्बभूवावनाविन्दुः स्वात्मगुणं धिगस्तु कथयन्–या-

८। ति चीणनां। + + + पि जातजननैरद्यनतौ सच्चितोमेरः संस्थिरताचि-

९। धौ प्रथमतः सैषो (शेषो) व्यधोयन्त्रितः॥

Translation. [The first two lines are illegible; they apparently contain a praise of Kálí.] "For her the Bráhmaṇa of the name of Náráyaṇa preceded by Jaya, the servant of Sambhu, erected this beautiful edifice, the resplendent giver of all blessings. In the month of Mágha of the year numbering the *Srutis* (4), the fire, *Sikhí* (3), the flavours, *rasa* (6), and the moon (1 = 1634, and corresponding to the Christian year 1712) Jayanáráyaṇa Sarmá built this joyous house. Having attained her blessings, he completed this delightful and agreeable house, on Sunday, the 10th of the waxing moon, in the month of Mágha. As long as this beautiful temple shall flourish on the earth so long will the moon, condemning her own qualities, feel degraded, the Meru mountain remain stationary, and Sesha remain sunk in the region below." [The last two lines are full of lacunae, and only their purport is here given.]

No. 6.

This is from the temple of Annapúrṇá. It is inscribed on a slab measuring 13″ × 8″, and fixed over the doorway. It comprises 11 lines of writing in the Bengali character. The following is a transcript of it in Devanágarí letters:

सुराणां वरदे देवि शङ्करप्राणवल्लभे। अन्नपूर्णे दयापात्रे भक्तानां वरदा भव॥ १॥

जवाकुसुमसङ्काशं तव वर्णं रविप्रभे। अधुना किमहं याचे मोक्षं माङ्गं (मङ्गं) ददस्व वै॥२॥

शुद्धस्फटिकसङ्काशं प्रासादञ्चातिनिर्म्मलं। कृत्वा मठवरं रम्यं स्वयं शम्भोरनुग्रहात्॥ ३॥

वेदाब्धिसागरयुते चन्द्रे शाके वरे शुभे। प्रमाथीनामवर्षे वै माघे मासि निरन्तरं॥ ४॥

विवेकनिपुनेनैव पूजकेन द्विजन्मना। रामदत्तेन विदुषा प्रासादः क्रियते मुदा॥ ५॥

श्रुतं सर्व्वपुराणञ्च दत्तं वित्तं द्विजातये। जातवेदोऽतं हव्यं यज्ञं वेदविधानतः॥ ६॥

प्रभवेनिर्म्मले वंशे विमला(ल)कीर्त्तिकारकः। देवकीनन्दनसुतोरामदत्त इति स्मृतः॥ ७॥

रामांशेन(?) युतोनाम ततः शङ्करपूजकः। सुहृदानरतोधीरोरघुनाथसमः क्षतौ॥ ८॥

Translation. "O goddess, giver of blessings to immortals, thou art the delighter of the heart of Sańkara. O Annapúrṇá, be thou the giver of blessings to those who are thy deserving votaries! Thy complexion is resplendent as the rising sun of the colour of the hibiscus flower. Deign, O Sańkarí, to grant me salvation which I pray of thee, after having built this noble maṭha, this pure place, bright as clear crystal through the grace of Sambhu himself. In the Saka year of the Vedas (4), the sky (0), the

oceans (7), and the moon (1, = 1704, and corresponding to the Christian year 1782), in the beneficent year *Pramáthí* (of the cycle of Jupiter), in the month of Mágha, this place was built by the learned Rámadatta, the firm in knowledge, the worshipper, the Bráhmaṇa. He had heard all the Puraṇás, he had given alms to Bráhmaṇas, he had offered oblations to the fire, he had performed Yajṇas according to the rules of the Vedas, he was born in a pure family, the pure, the doer of noble deeds, the son of Devakínandana, he was known as the auspicious Rámadatta. A part of his name was associated with Ráma, and hence he was a worshipper of Saṅkara. He was attached to his friends. He was the doer of good deeds like Raghunátha."

Rámadatta was kept out of the Páṇḍáship of Vaidyaṇátha by a rival claimant for a long time, but was appointed to the post in 1782, by order of the Provincial Council of Burdwan. The temple marks the year of his installation.

No. 7.

There are two inscriptions in the temple of Ánandabhairava, one on the doorway, and the other on the pedestal of the image. These have been numbered 7 and 8 by me. No. 7 measures 9″ × 5,″ and comprises 9 lines of Sanskrit in the Nágarí character. The following is a transcript :

१। श्रीमद्रामाभिधेाभूत् क्षितिविबुधवरैर्वन्दनीयप्रभावे-
२। भूदेवेवैद्यनाथारुणचरणसरेाजालिवन्मत्तचित्तः।
३। श्रानन्दाख्योऽतिदक्षः च(ख)णति वऽयुतस्तस्य पुत्रेषु
४। मुख्यः यः सा + + रचत्तुः प्रमुदितहृदयः प्रीतयेऽमुं चका-
५। र॥ १॥ तत्पौत्रेाभुवि विश्रुतस्तु परमानन्देागुणैश्च-
६। न्द्रमाः सर्व्वानन्दइवेत्यसौ गुणवि(नि)धेर्जातेाजना-
७। नन्दनः शाके पक्षचतुर्मुनेान्दुगणिते पक्षे सि-
८। ते फाल्गुने मासे भैरवविग्रहं + सदने
९। संस्थाप्य तस्मै ददौ ॥ २॥ सा(शा)के १७४५॥

Translation. "He, of the name of Ráma, whose glory was bepraised by all the wise men on earth, who was like a god on earth, whose mind was drunk like a bee at the resplendent lotus-feet of Vaidyanátha, was born. His name was Ánanda; he was well experienced. The noblest among his sons,—of contented mind,—made this for the gratification (of the lord). Paramánanda was born; his grandson renowned in the

world, the moon of good qualities, the delighter of men like Sarvánanda (the son). In the Saka year reckoning five (5), four (4), the sages (7), and the moon (1 = 1745, and corresponding to the Christian year 1823), in the wane of the month of Phálguṇa, having established an image of Bhairava in this abode, he dedicated it to him. In the Saka year 1745."

No. 8.

No. 8 is in three lines of Sanskrit. It is so filled up with sandal-paste that I have not been able to get a legible facsimile of it. It seems to be in the Kuṭila character.

No. 9.

The temple of Súrya contains two inscriptions, and I have numbered them 9 and 10. No. 9 occurs on the pedestal of the image, and it comprises two lines of engraving in the Kuṭila character; but the letters have suffered from decay, and have been otherwise so filled up with sandal-paste that I cannot read the whole of it. The legible letters are:

देयधर्म्मोयं ग्टडक देविकार दाग्र + त्मकयता + + + गा उकेदा + + +

The first five letters are perfectly clear, and they comprise the usual Buddhist formula of dedication—*Deya dharmoyam.* The name of the dedicator cannot satisfactorily be made out. It seems like Gṛiddhaka Devikára-dáśa, unquestionably a Buddhist monk, who had consecrated an image of Padmapáṇi, which now does service for Súrya.

No. 10.

A record in five lines of Bengali character, not legible. The marked difference in the nature and character of the two inscriptions (Nos. 9 and 10) affords very strong presumptive proof of the image having been brought from another place, and not made for the temple.

No. 11.

A record in eleven lines of Bengali character placed on the doorway of the temple of Sávitrí Deví. The following is its transcript in Devanágarí letters:

१। धैर्य्योपास्यगुणार्णवोमुनिसमः सौजन्यरत्ना-

२। करः सत्सेव्यः शरदिन्दुनिर्म्मलयशा विप्रोथ-

३। तोषः(शः) शुचिः। श्रीगोवी(वि)न्दपदारविन्दमधुपः श्री

४। खे(शे) मकर्णः सुधीः प्रासादं समचीकरत् सुविपुलं श्रीशै-

५ । लजायाः प्रियं ॥ शाके वेदहिमांशुषड्विधुमि-
६ । ते माघे दशम्यां शुचौ विप्रश्रीयुत्खे (क्षे) मक-
७ । र्णसुकृती प्रासादमापूपुरत् । यत्रासौ प्रिय-
८ । नीलशैलवसतिं विस्मृत्य वासं व्यधादुत्तानी (दुत्ताली)
९ । परिपूरयन्त्यतिमती (मति) देवी विपत्तारिणी ॥
१० । यज्ञे बहुधनं दत्वा दत्वा दानानि————
११ । खे (क्षे) मकर्णोविदित्वा————

Translation. "Firm, adorable, a sea of merit, saint-like, an ocean of good behaviour, honoured by the good, having fame as untarnished as the moonlight in autumn, a Bráhmaṇa, the chief among Yatis, the pure one—such was the wise Kshemakarṇa, the bee on the lotus-feet of S'rí Govinda. He erected this large edifice, the approved of the daughter of the mountain, (Sávitrí is said to have been born of a mountain). In the S'aka year numbering the Vedas (4), the soothing-rayed one = moon (1), six (6) and the moon (1, = S'aka 1614 and corresponding to the Christian year 1692) on the 10th of the waxing moon in the month of Mágha, the Bráhmaṇa Kshemakarṇa, the doer of good deeds, completed this edifice, where dwells the goddess who obviates all misfortunes and fulfils all desires, forgetting her beloved abode on the blue hill. Having given a profusion of wealth at sacrifices, having given alms—Kshemakarṇa knowing"—(concluding part illegible).

Mr. Beglar takes this inscription to mean "the construction of the temple by several people."*

No. 12.

From over the doorway in the temple of Gaṇeśa. An inscription of eight lines in the Bengali character. The following is its transcript in Nágarí letters:

१ । सिद्धि (द्धिः) । श्रीगणेसा (शा) य नमः ॥
२ । वेदवसुरसेन्दुभिश्शाके सङ्गतेऽब्दे
३ । सते शुद्धे । टीकारामद्विजेन्द्रेण व्यधा-
४ । यि मठसुन्दरं ॥ स्रु (श्रु) तिवसुरसच-
५ । न्द्रैः सङ्गतेऽब्दे विशुद्धे द्विजवरमणि-
६ । टीकारामनाम्ना सुधाम्ना । विधुरिव
७ । मठ उच्चैर्व्वे(र्व्वै)द्युतासः (भः) कृतोयं हरसुत-
८ । गृहवासः सर्व्वदैवं प्रचक्रे ।

Translation. "May it be auspicious! Salutation to Gaṇeśa. In the pure year of S'aka, numbering the Vedas (4), the Vasus (8), the flavours (6),

* Archæological Survey Reports, VIII, p. 141.

and the moon (1, making together 1684, and corresponding to the Christian year 1762) the chief of Bráhmaṇas, Ṭikáráma, erected this beautiful temple (maṭha). In the pure year, numbering the *Srutis* (4), the *Vasus* (8), the *Rasas* (6), and the moon (1, corresponding as above) the noble Bráhmaṇa and sage, named Ṭikáráma, whose abode is pure, and who is always engaged in good works, erected this lofty maṭha, beautiful as the moon and resplendent as the lightning, for the abode of the son of Hara."

For a proper understanding of the dates of the different temples above described, it is necessary here to notice the history of the several persons who have been named as their dedicators. They all belong to one family—that of the present High Priest or *Sardár Páṇḍá*, as he is generally called. He says he has a *kursinámah* or genealogical table preserved in the archives of the temple, and has furnished me with extracts from it, from which I work out the following notes. I must add, however, that I have not seen the table in question, and can say nothing about its authenticity.

The tradition is that the liṅgam of Vaidyanátha was in charge of hermits who had worshipped it for ages, but that in the 16th century, twelve Bráhmaṇas, all householders, came from Mithilá and took part in the worship, and officiated as priests for pilgrims who could not themselves consecrate their offerings. This was but natural. Indian hermits are mostly illiterate men, and in a contest for supremacy in religious ministrations it is hopeless for them to get the better of clever Bráhman householders and men of the world. In time one of the twelve was so far successful as to become the leader of the band, and to wheedle Mukunda, the Sannyásí who had then charge of the liṅgam, out of that charge, and make himself the owner and master of the sacred shrine. His name as given me by the Head Priest, was Juḍaṇ Ojhá ; but Bábu Bholánáth Chunder, in his article in the *Mookerjee Magazine* calls him Chandra Muni, and the party from whom he got the liṅgam, Chiku, a disciple of Mukunda ; but according to my information Chiku was the grandson of Juḍaṇ Ojhá, unless we assume two Chikus. The surname Ojhá, is a corruption of Upádhyáya, and that would suggest the idea that the Bráhman was a professor of Sanskrit learning. When he came to Deoghar is not known, but from what follows it will be seen that he must have come in the second half of the sixteenth century.

(II). His son Raghunátha succeeded him, and, according to the inscription No. 1, requested Púraṇa Malla to erect the great temple in 1596 A. D., or, as the second inscription would have it, himself erected the shrine. In either case he must have become the Chief Priest a few years before 1596 A. D., and his father may be fairly presumed to have had a ministry of 20 to 25 years.

(III). Raghunátha was followed by his son Chiku Ojhá, who seems to have done nothing to commemorate his name. His son was

(IV). Manu Ojhá, who, like his father, did nothing to associate his name with the sanctuary of Vaidyanátha. His successor

(V). Vámadeva commenced the building of the temple of Lakshmínáráyaṇa. Allowing 10 years for the remainder of the ministry of Raghunátha from 1596 and 20 for the duration of the ministry of Chiku and Manu, Vámadeva would come after 1626 A. D. His son

(VI). Kshemakarṇa is credited with the erection of the temple of Sávitrí, and its date is given in inscription No. 11 at 1614 S'aka. = A. D. 1692.

(VII). Sadánanda was the son and successor of Kshemakarṇa. He was followed by his son

(VIII). Chandramohana Ojhá. His successor

(IX). Ratnapáṇi Ojhá built the temple of Párvatí. As Kshemakarṇa dated his temple of Sávitrí in the S'aka year 1614 = A. D. 1692, and Jayanáráyaṇa's temple of Kálí was completed in the S'aka year 1734 = A. D. 1612, Ratnapáṇi, the great-grandson of the former and father of the latter, may be fairly presumed to have lived at the beginning of the 18th century, and the date of the temple of Párvatí must be some time in the first decade of that century.

(X). Jayanáráyaṇa was the son and successor of Ratnapáṇi, and he completed the temple of Kálí. The date of this shrine in inscription No. 5 is 1634 of the S'aka era. His son was

(XI). Yadunandana. He contributed greatly to raise the resources of the temple by obtaining from the Gidhaur Rájas Mardán Siñh and Syáma Siñh a permanent grant of the taluk of Deoghar and of the village of Kuteá in the Gidhaur Ráj, the net income of which now amounts to a considerable sum. The grant is dated 30th of Phálguṇa in the Bengali year 1130 = A. D. 1737. I have seen the deed, and have no reason to doubt its authenticity. It affords a fixed point in the calculation of the dates of the Ojhás. It is not known how long Yadunandana lived after obtaining the grant, but at his death his son appears to have been an infant, who was set aside by one

(XII). Tikáráma, a distant relative, who officiated as head priest for some time. To him is attributed the temple of Gaṇeśa in 1762. He was ultimately deposed from his post by the rightful owner,

(XIII). Devakínandana. Devakí had studied Sanskrit for a long time at Víranagar, and was reputed to be a great scholar. During his ministry Deoghar and the surrounding country were taken from the chief of Gidhaur by the then Rája of Birbhúm, Ali Naki Khán, who defeated him in battle,* and, on his death, his son Rámadatta was, through Court influence, set aside, and the chief Páṇḍáship was obtained by one

(XIV). Náráyaṇadatta, said to have been a porter in his service. Náráyaṇadatta obtained a sanad from the Rájá of Birbhúm, and officiated

* Hunter's Rural Bengal, p. 435.

as priest for some time. During the 8th decade of the last century, British power was fully established in Birbhúm by the defeat of Ásád Jám Khán, and Rámadatta sued the usurper before the Provincial Council of Burdwan, and obtained a perwana, dated January 31, 1782; but his rights were not fully restored to him until October 23, 1788.

(xv). Rámadatta signalized his ministry by the erection of the temples of Rámachandra, of Súrya, of Sarasvatí, and of Annapúrṇá. On his death in 1793 A. D. his son

(xvi). Á'nandadatta succeeded him in the ministry. He commenced the building of the temple of Ánandabhairava, but did not live long enough to finish it. His third son

(xvii). Paramánanda set aside the claims of Sarvánanda, a grandson of Ananda by his eldest son, and himself became the chief priest. He caused a large tank to be excavated in mauzá Kurmidehi, and named it Ánanda-ságara. He died in 1820 and a dispute arose about the succession, and this lasted for a long time, but the ministry of the temple was conducted by

(xviii). Sarvánanda, who in 1823 completed the temple commenced by his grandfather, and consecrated the image of Ánandabhairava. The date in the inscription on the temple is S'aka 1745 = A. D. 1823. Sarvánanda served as high priest for 14 years.

(xix). I'śvarinandana was the son of the last; he held a long ministry of 40 years. His son Púrṇánanda died in the lifetime of his father, and the succession, after some dispute, devolved in 1876, on the grandson

(xx). S'ailajánandana Ojhá, who is the present Sardár Páṇḍá. He is well versed in the S'ástras, and is generally respected for his learning, piety and public spirit.

According to the details above given the temples may be arranged chronologically thus:—

	Name.	Dedicator.	Date.
1.	Vaidyanátha,	Púraṇa Malla,	1596.
2.	Lakshmí-náráyaṇa,	Vámadeva,	*circa* 1630-40.
3.	Sávitrí,	Kshemakarṇa,	1692.
4.	Párvatí,	Ratnapáṇí,	*circa* 1701-10.
5.	Kálí,	Jayanáráyaṇa,	1712.
6.	Gaṇeśa,	Ṭikáráma,	1762.
7.	Súrya,	Rámadatta,	*circa* 1782-93.
8.	Sarasvatí,	Ditto	Ditto.
9.	Rámachandra,	Ditto	Ditto.
10.	Vagalá Deví,	Ditto	Ditto.
11.	Annapúrṇá,	Ditto	1782.
12.	Ánandabhairava, commenced by Á'nandadatta, completed by Sarvánanda,		*circa* 1810-23.

These dates show very clearly that the temples of Deoghar are all very modern. But from what has been stated above with reference to inscription No. 2, it will be seen that I make an exception in favour of the principal temple. According to the inscription No. 1, it should date from 1596 A. D.; but I do not wish to submit to its authority. If we are to believe that there was no temple before the date of Púraṇa Malla, why should Raghunátha request him to build the temple? and what did Juḍaṇ, the father of Raghunátha, obtain and worship? There must have been something which Mukunda and his ancestors had worshipped, and which was made over to Juḍaṇ *alias* Chandra Muni, long before the advent of Púraṇa Malla in Deoghar. The testimony of the Vaidyanátha Máhátmyas, both of the Padma Púráṇa and of the Śiva Puráṇa, is worthless. The Máhátmyas did not originally form a part of the Puráṇas to which they are affiliated, and are obviously of a recent date. I have seen no old MS. of those works, and the quotations above given have been taken from a Benares lithograph of the first, dated Samvat 1931, and from a print of the second, dated Samvat 1938, and both have obviously been tampered with. The Máhátmya affiliated to the Padma Puráṇa refers to the temples of Sávitrí, Gaṇeśa, and Kálí, and they were, as shown above, built in 1692, 1762 and 1712 respectively, and it must therefore either be more recent, or quite corrupt. There are, however, several authentic works on pilgrimages dating from the 12th to the 14th centuries, and they refer to the sanctity of Vaidyanátha. Authentic portions of the Puráṇas also refer to it, and they are unquestionably anterior to the 10th century, and in their time Vaidyanátha must have attained considerable celebrity to be fit for record. And the questions, therefore, arise, did Vaidyanátha then and up to the time of Púraṇa Malla remain only as a stump of stone projecting four inches above the level of the ground, in an open field, and unprovided with any shelter? or, was there a temple over it, which was replaced by a larger one by Púraṇa Malla; or does the record refer to something connected with the temple, and not to the temple itself? The first question is so futile that it must be at once rejected. A place of great sanctity, highly eulogised in the Puráṇas, and strongly recommended as a place of pilgrimage, could not have remained in the form of a stump of four inches on the bare earth in on open field for centuries without a covering, during the Hindú period, after the downfall of Buddhism: some pilgrim or other would have soon provided it with a temple. There are tens of thousands of liṅgams in all parts of India, but out of them only twelve have been selected to be specially sacred and by far the most ancient. As shown above, the Hindús and their Śástras are unanimously of opinion that Vaidyanátha is one of these twelve, and contemporaneous with the Mahákála of Oujein, dating over 2000 years, of Somanátha of Saurásh[illegible]ra, of Rámeśa near Cape Comorin noticed in the Rámayáṇa, of Bhuvaneśvara in Orissa,

dating from the 7th century, and seven other equally old and renowned liṅgams, and it could not have all along remained neglected and without a temple. The inference, therefore, is inevitable that there must have been a temple of some kind or other. This leads to the second question as to the present temple having replaced an old one. That might at first sight appear probable; but the belief of the Hindús is that it is a sacrilege to pull down a Śiva temple and rebuild it, and the denunciations in the Smṛitis are dire against such sacrilege. Rebuilding of temples is permitted in all cases where movable images are concerned; but in the case of liṅgams which are fixed to the earth, the pulling down of the temple is equal to the desecration of the liṅgam itself, which from that moment ceases to be adorable, and must at once be cast into a river. I cannot, therefore, believe that Púraṇa Malla knocked down an old temple, and erected a new one in its place. No Hindú remaining a Hindú and claiming religious merit by the act could have done such a thing. Repairs, additions and extensions are allowed—nay commended; but a marked distinction is made between them and pulling down. The latter is not permissable under any circumstance, not even for the purpose of rebuilding. It is true that when Aurangzebe desecrated the temple of Viśveśvara at Benares, the liṅgam there was removed, and subsequently provided with a new temple in its neighbourhood, but the act was not in accord with the canons of the Smṛitis which prohibit the removal of liṅgams, and only tolerated in the case of a very renowned liṅgam, as in the case of Somanátha at Gujarát, but it would be no precedent for a Hindú to follow as a voluntary act of piety. It is obvious to me, therefore, that the tradition which holds the temple to be old, and ascribes to Púraṇa Malla only the lobby is correct, and that having defrayed the cost of the lobby which became a part, and an integral part, of the temple, he, by a figure of synecdoche, claimed credit for the whole. In fact he does not use any equivalent for the word "whole," but only by implication suggests the idea. The inscription, moreover, is placed within the lobby, and its purview need not extend beyond the boundary of that apartment. The same may be said of the inscription of Raghunátha. That worthy defrayed the cost of the porch which put to shade the work of an oppressive superior and conqueror, and by a figure of speech took to himself the credit of building the whole of the temple and a great many other things which probably never existed. The rivalry of the priest and the potentate can be best explained by accepting the truth of this tradition.

Mr. Beglar is of opinion that Deoghar was formerly the seat of a large Buddhist establishment; but the arguments on which he has come to it, do not appear to me by any means satisfactory. He says, "It now remains to ascertain, if possible, why these temples were built here, and

not rather at any other place ; this is accounted for by the existence of the two ancient inscribed statues, one of which is clearly Buddhist ; and of a third figure, not inscribed, but clearly Buddhist, being a fine-seated statue of Buddha himself, beautifully polished, and equal in execution to the finest statues to be met with in Bihar. These statues prove beyond a doubt that here was at one time a large Buddhist establishment.

"What this establishment was named, it is, perhaps, impossible now to determine with certainty ; but if I may be permitted to speculate, I should think it to have been the site of the famous Uttániya monastery of Winjjha. Winjjha is the Páli equivalent of Vindhya; the passages in Turnour referring to it are—p. 115—' the monarch, departing out of his capital and preceding the river procession with his army through the wilderness of Winjjha, reached Tamalitta on the 7th day,' and in p. 171, ' From various foreign countries many priests repaired hither' * * * * ' There Uttaro attended, accompanied by sixty thousand priests from the Uttániya temple in the wilderness of Winjjha.'

"It is evident that the wilderness of Winjjha lay on the route from Pátaliputra to Tamluk. I have indicated some of the routes from Tamluk to various places. The principal route would, it appears to me, have to pass through, or close to, modern Bankurah ; from here there was a choice of several routes. Clearly the route to Bhágalpur would branch off northwards from there, passing through Seuri, under Mandar, close past Bhaskináth; it is remarkable that an old track yet exists from Bhaskináth to Deoghar Byjnáth, whence it goes on skirting the eastern spurs of the Kawalkol range, past Afsand, Parvati, Bihar to Patna. I should consider that this was the route taken by the king when he passed through the wilderness of Winjjha, for it appears to me pretty certain that the wilderness of Winjjha can only refer to the wild country now known in part as the Santál Parganas.

"If this be admitted, we have but one place in the Winjjha forests where Buddhist temples existed, as testified by existing Buddhist relics, and this place is Deoghar Baijnáth.

"It is remarkable that close to the city of Deoghar and still closer to the temples is a small village named Utmuria ; this may be a corruption of the original of the Páli Uttama. I put forward this suggestion merely in the absence of any more positive ; it is possible that an examination of the 3-line inscription from the Buddhist statue noticed before may throw new light on the subject."*

The starting question "why the temples were built here (at Deoghar) and not rather at any other place" is simply gratuitous. One may as well ask why was London built on the bank of the Thames, and not on that of the

* Archæological Survey Reports, Vol. VIII, pp. 141*f.*

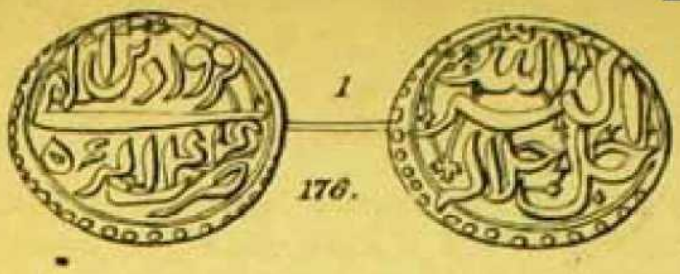
Dee or of the Liffey ? There is no reason why it should be elsewhere and not here. A pious man builds a temple and endows it richly, and its grandeur soon secures it notoriety ; or a hermit sets up an image and effects miraculous cures, and they suffice to make the place famous, to attract pilgrims, and to promote the construction of costly buildings. When I was at school, I learnt Lourdes to be a very small town, or rather a large village, of no importance whatever, and not worth knowing, though ancient ; but the cures lately effected there have made it so famous that not to know it now would imply gross ignorance of passing events. If the cures continue, it will in time become a large town, and a place of great consequence. Vaidyanátha is noted principally for the cures effected there, and it is but reasonable to suppose that it rose into importance from the time when the cures were first effected. Tárakeśvara, in the Hooghly district, is known by every pilgrim to be a modern place, not quite two hundred years old, and not noticed in any authentic Sanskrit work ; but the cures effected there makes it a powerful rival of Vaidyanátha. In the case of miraculous cures there is no necessity whatever for any anterior sanctity or fame, so long the cures are satisfactory.

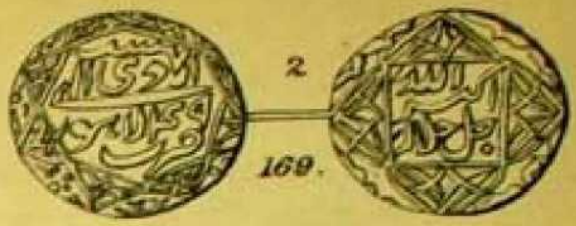
Nor does the presence of the Buddhist statues in any way militate against spontaneous fame. The temples in which the statues occur are of very recent dates. Ánandabhairava's temple dates from A. D. 1823, that of Súrya from 1790, and that of Sávitrí from 1692, and we have nothing to justify the belief that Buddhist sanctuaries existed at the place till such recent dates side by side with Vaidyanátha. I feel certain that even Mr. Beglar would not admit that there was a Buddhist temple at Deoghar in the third decade of this century, from the sanctuary of which the image of Ánandabhairava was removed in 1823. The temples of Lakshmí-náráyaṇa, Párvatí, and Annapúrṇá have images which, I have shown above, have been brought from old temples elsewhere ; if we accept the local theory we must believe, by parity of reasoning, that they too thrived side by side with Buddhism. This would be absurd, and the most obvious conclusion would be to assume that the Buddhist, as well as the Hindú, images have been brought from elsewhere, and set up from time to time according to circumstances. Nor is it necessary to assume that they have been brought from one place, and a near place. They are of such a character as to admit of their being easily conveyed from very distant places. The inscription No. 3 is from Mandár, and some of the images may have likewise come from that place.

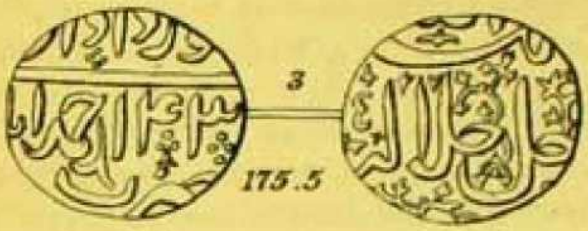
The speculations regarding the identity of Uttániya with Deoghar are exceedingly imaginative, and cannot by any means serve as data of sufficient importance to justify their being accepted as majors in an argument of this kind. To put the speculations into logical forms :—1. Uttániya lay within a forest of the Vindhya mountain ; the Santal Pargannahs

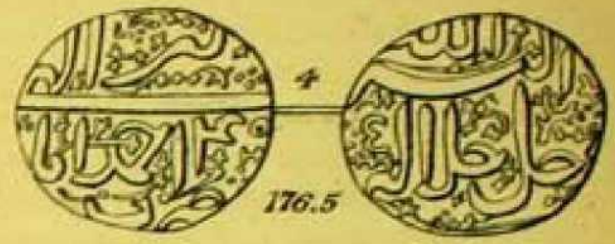
are mostly wild country at the eastern end of the Vindhyan chain; therefore Uttániya is the same with Deoghar. 2. There are several routes from Patna in the north to Tamluk in the south; one of them passes from Bankurah to Bhágalpur to the north-east; therefore Deoghar lay in the way from Patna to Tamluk. 3. Uttániya was a famous monastery from which sixty thousand priests issued forth in a body; Deoghar is a small town surrounded by uninhabitable jungle and wild hills; therefore Deoghar is Uttániya. 4. Uttániya is very like Utmuriá in sound; Utmuriá is near Deoghar; therefore Deoghar is the same with Uttániya. Taking the speculations in these forms one cannot resist the temptation of recalling Fluellen, and saying—there is a river near Monmouth and there is a river near Macedon, and salmons grow in both; therefore king Hal is the same with Alexander the Great.

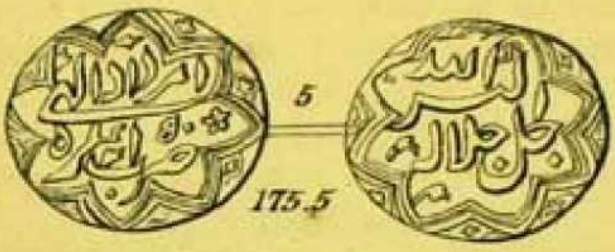
I feel that my remarks in regard to the origin and date of Vaidyanátha are more destructive than constructive, and that I fail to supply fixed dates and positive statements; but in the absence of satisfactory data, it is better to rest contented with such negative results than to mislead the public by mere conjectures, which are very apt to be taken for facts, and to result in falsifying history.

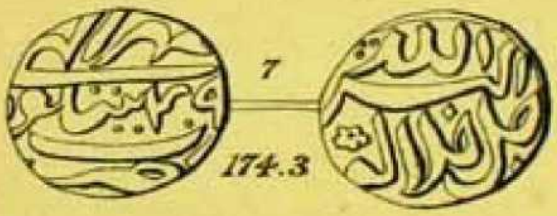


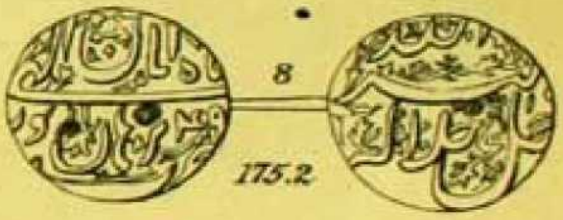


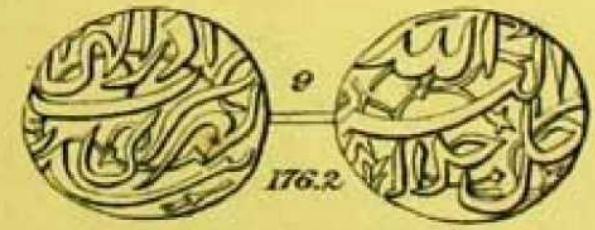


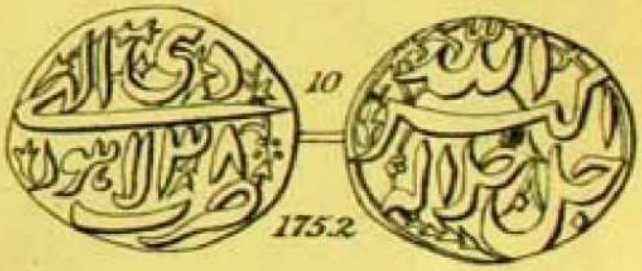


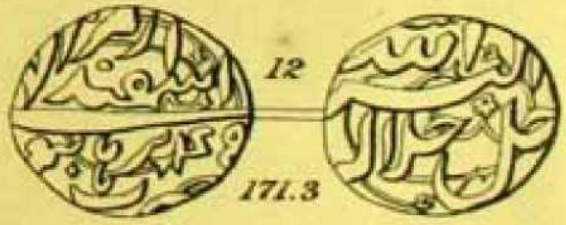






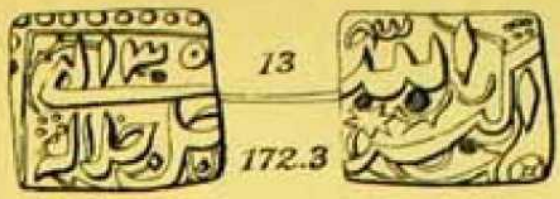






C. J. Rodgers, del.

RUPEES OF THE MONTHS OF AKBAR'S ILÂHÎ YEARS.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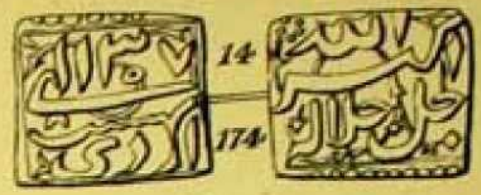
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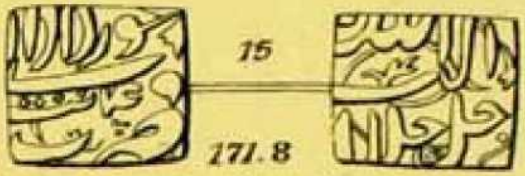
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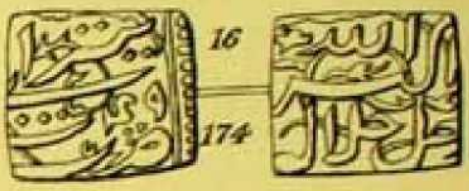
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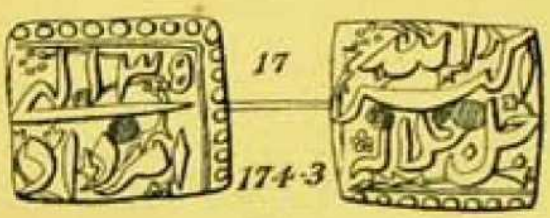
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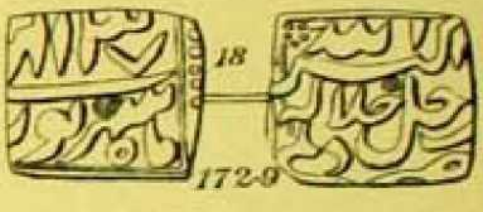
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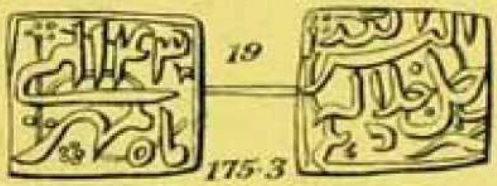
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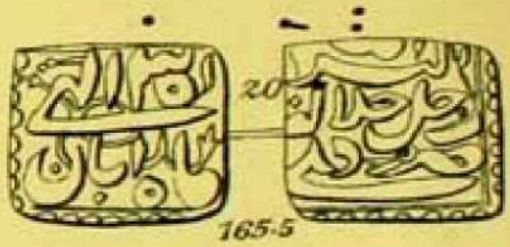
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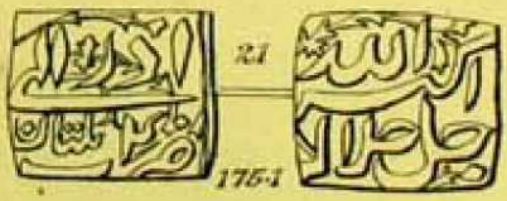
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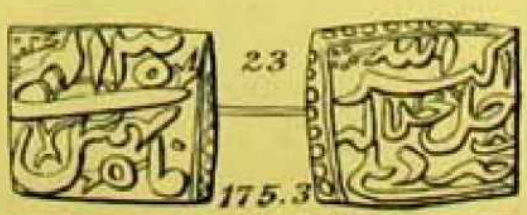
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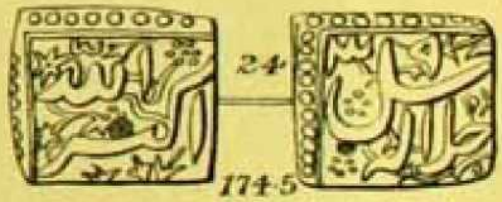
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C. J. Rodgers, del.

RUPEES OF THE MONTHS OF AKBAR'S ILĀHĪ YEARS.

Lithographed at the Surveyor General's Office, Calcutta, May 1883.

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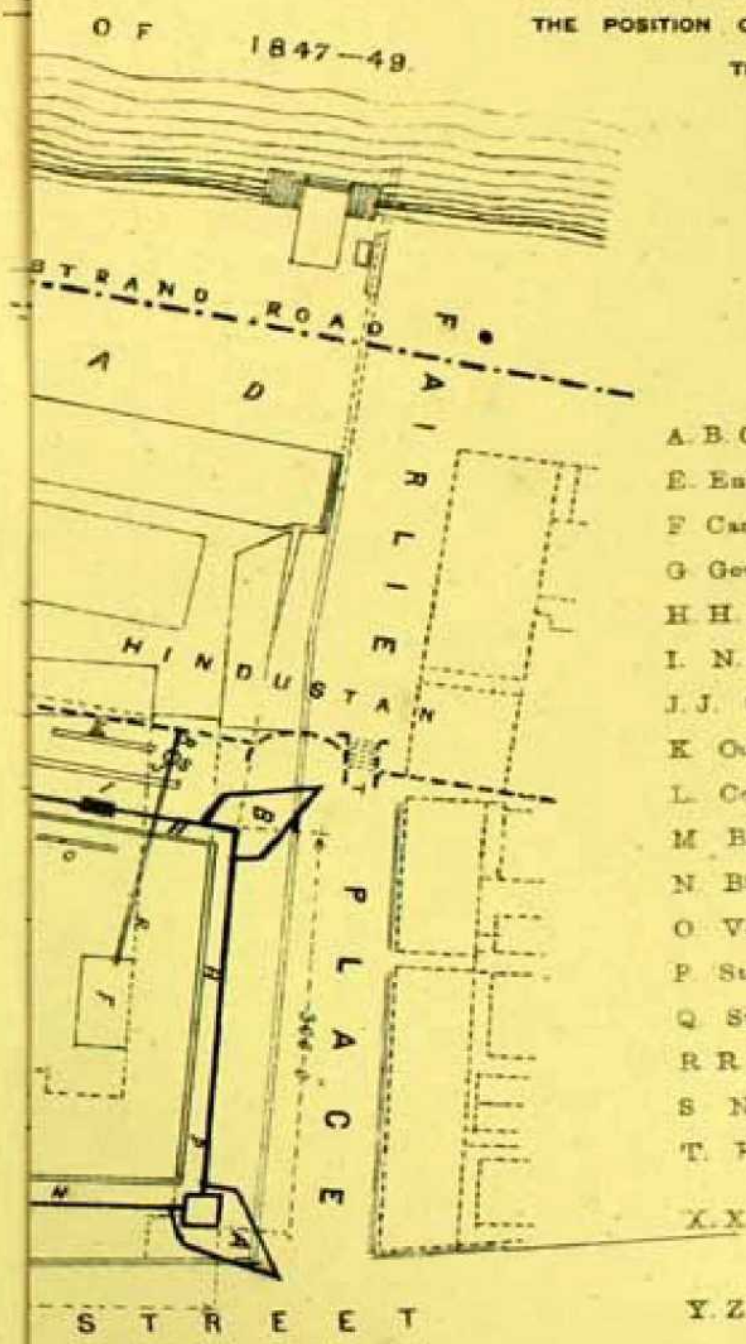
JETTIES

PLAN

OF THE NEIGHBOURHOOD OF THE OLD FORT, SHEWING THE STREETS, ETC., EXISTING IN 1847. THE POSITION OF THE FORT IS SHEWN IN THICK OUTLINE.



A. B. C. D. The four Bastions.
E. Entrance from the East.
F. Carpenter's Shop.
G. Governor's House.
H. H. Inner space between curtains.
I. N. W. River Gate.
J. J. Outer Ramparts.
K. Outer or River Wall.
L. Corps de Garde.
M. Barracks.
N. Black Hole Prison.
O. Verandah Wall (only found here.)
P. Stair to Roof (shown in plate—.)
Q. Stair mentioned by Holwell.
R. R. Drain.
S. New Well.
T. Pucca Ghaut (cut through by Mr. S. Leslie.)
X. X. Buildings as now in existence with road over site of N. or Black Hole.
Y. Z. Line of Pipes put down February, 1860.

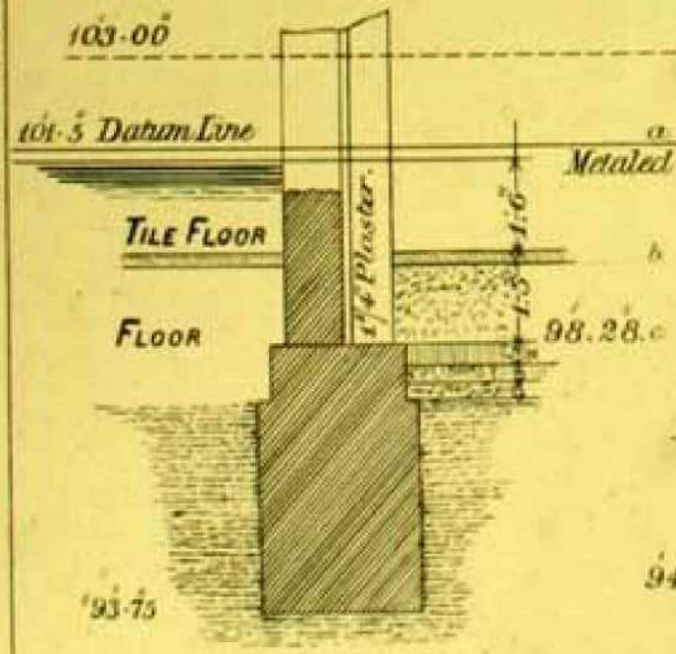
Scale 200 Ft = 1 Inch.

Journal, As. Soc. Bengal, Vol. LII. Pt. I, 1883.

Lith. & Printed by W. Newman & Co. Lt. Calcutta.

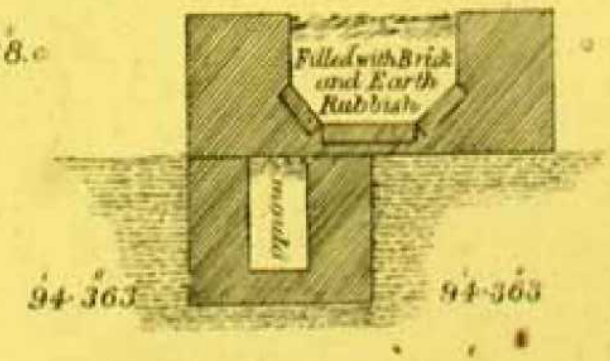
REMAINS OF OLD FORT WILLIAM, CALCUTTA

FIG. I



Section of Wall of Carpenter's Shop shewing form and levels of three dates. a. b. c.

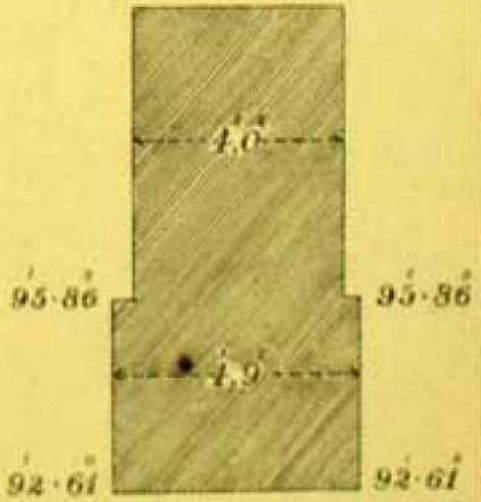
FIG. III



Section of old Drain with Modern Drain over it, both filled in, and Macadam Road over it. Scale 8ft. to 1 inch.

The Lower being the Drain of the Old Fort, the Upper of a later Date.

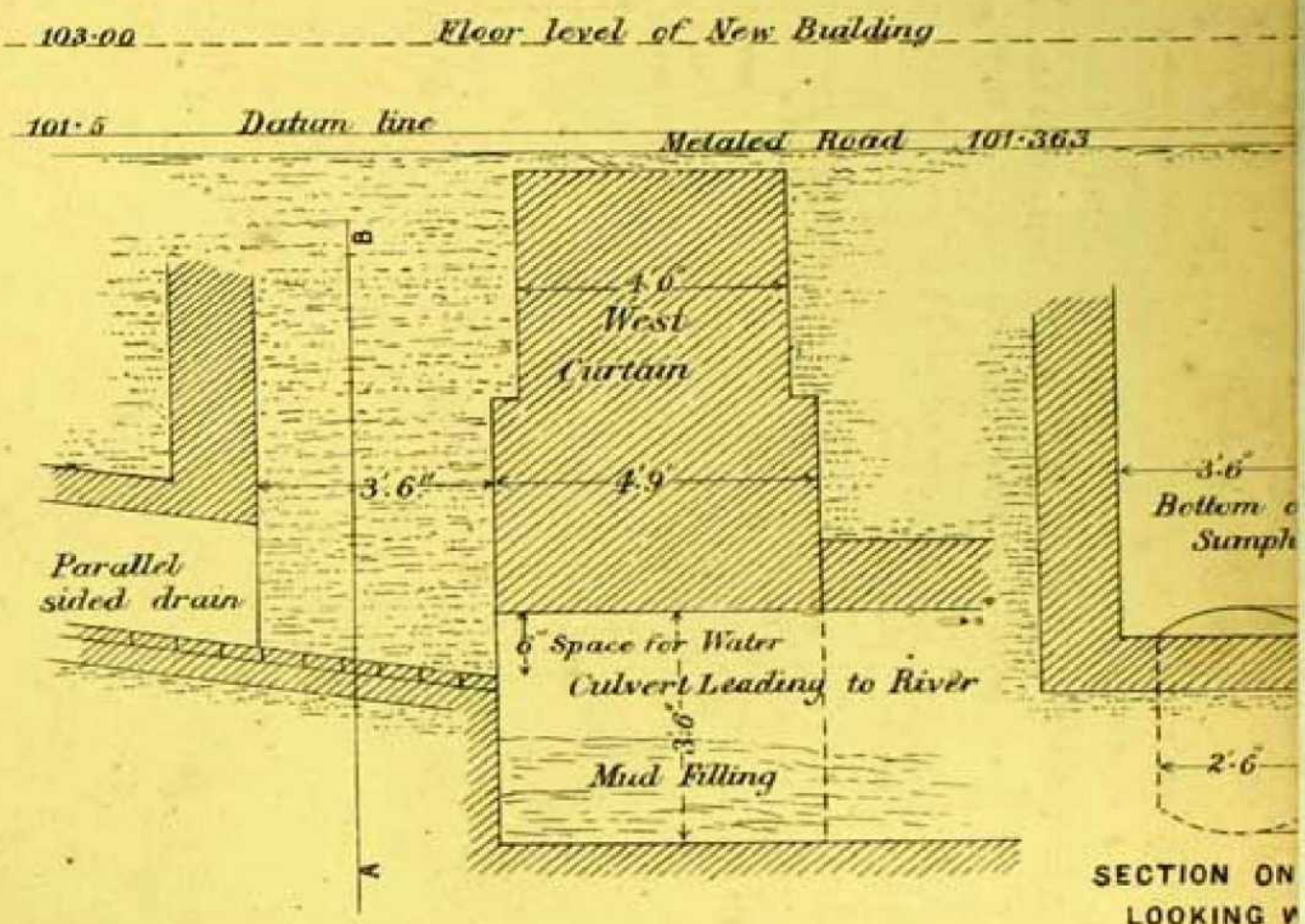
FIG. II



Section of North Curtain Wall.

FIG. IV.

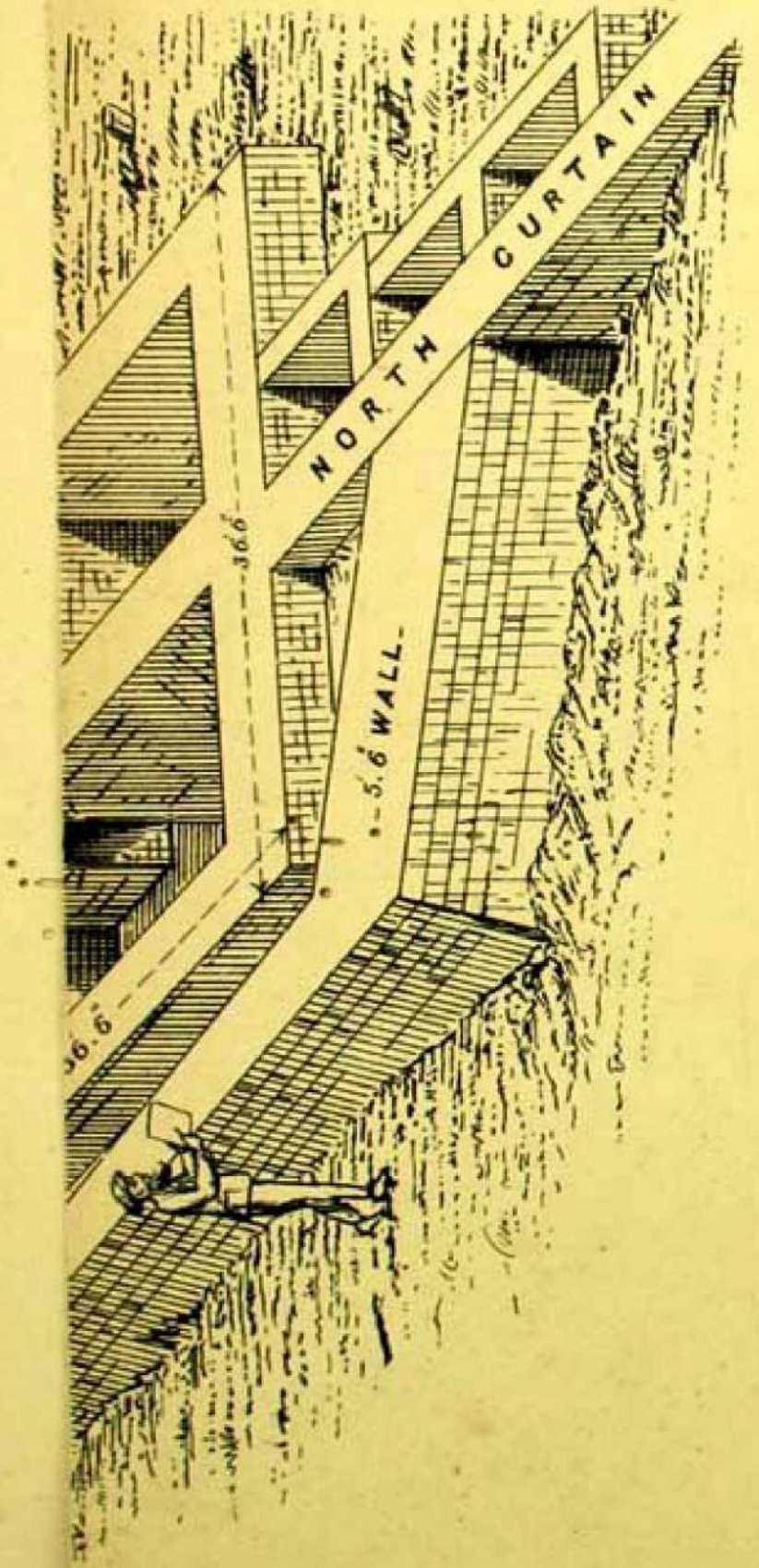
END OF DRAIN CULVERT AND SUMPH THROUGH



SECTION OF DRAIN AND SUMPH
LOOKING SOUTH.

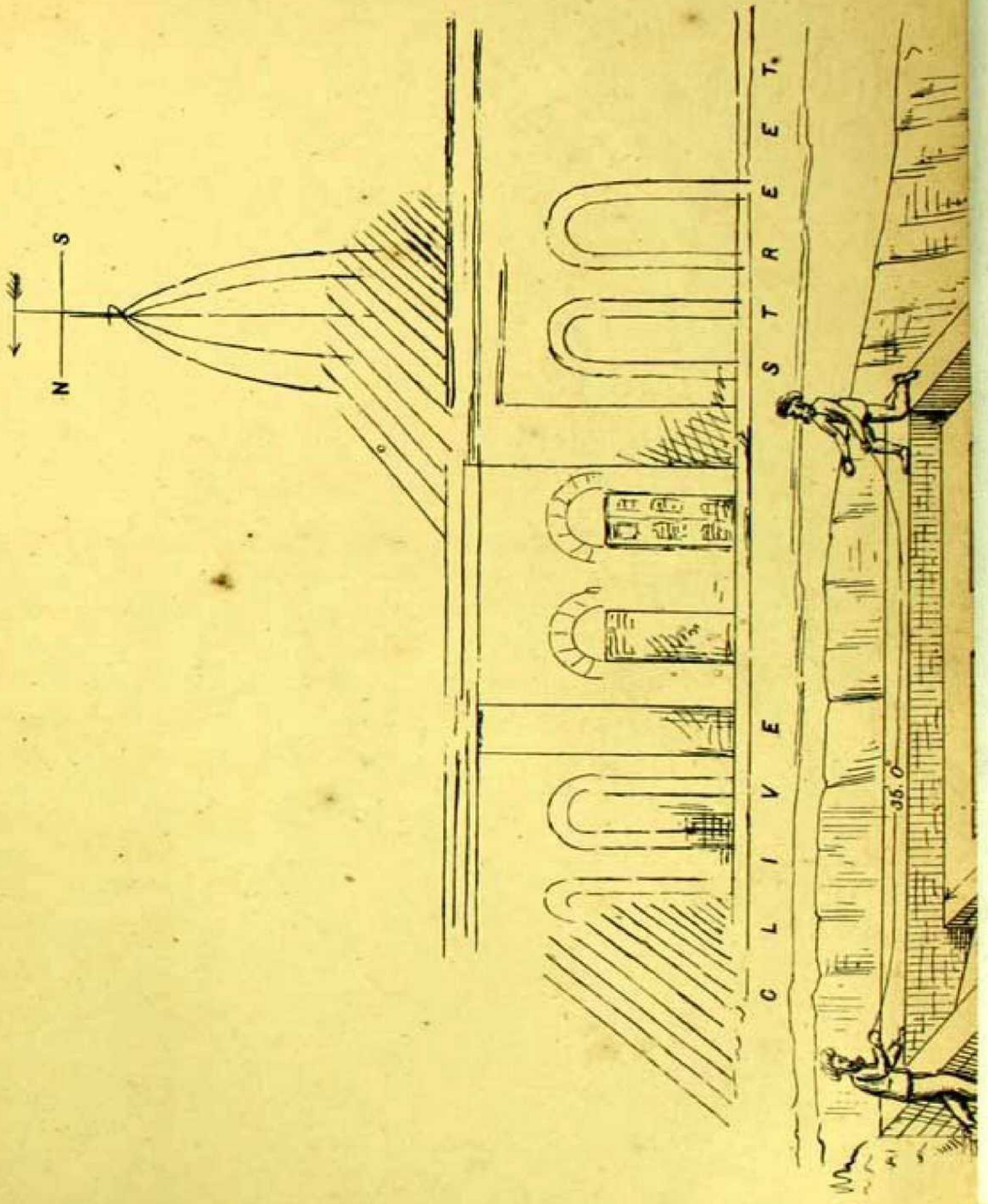
SECTION ON
LOOKING W

REMAINS OF OLD FORT WI



ING THE E. I. R. Co.'s OFFICES.

Additional work of 1756



ROUGH SKETCH SHOWING NORTH-EAST BASTION EXPOSED DURING THE EXCAVATION

NOTE.—The inner square portion is the earlier work, the outer portion with the sloping s

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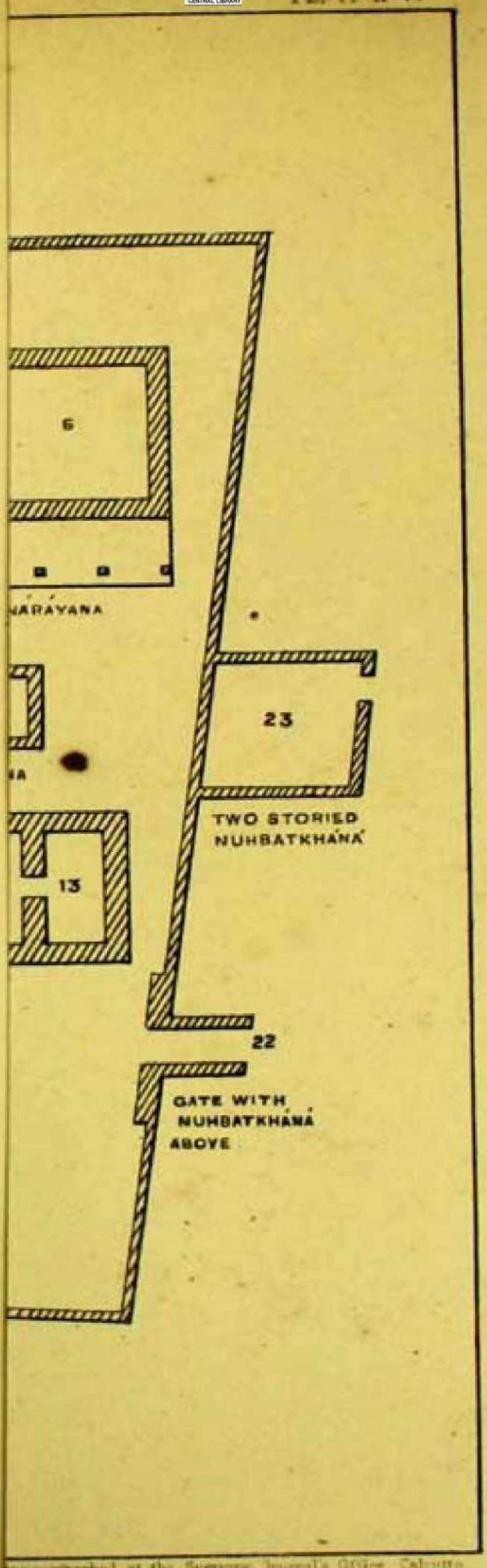
PLATE X V.



Photozincographed at the Surveyor General's Office, Calcutta.

JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part I.—HISTORY, LITERATURE, &c.

Nos. III & IV.—1883.

***Memorandum on the superstitions connected with child birth, and precautions taken and rites performed on the occasion of the birth of a child among the Játs of Hoshiyárpur in the Panjáb.*—By SIRDÁR GURDYAL SINGH.**

I have selected the above subject as I think it will give a clear insight into the superstitions of the rural population; for a native woman can never omit to do anything, however ludicrous it may appear to others, which may be thought necessary for the safety of her son, or which may be believed to be conducive to his happiness, or which may be imagined to have the power of warding off any danger, real or imaginary. I wish to be pardoned for mentioning anything herein which may be improper according to our ideas of propriety in such matters, for I must give a faithful description. I have already omitted what appeared to be somewhat indecent.

If abortion has ever happened, or if there is any fear of it, besides the charms which they might get from the Syánás or "cunning men," any one of the following articles is kept on the body of the woman with child to prevent abortion.

1. A small piece of wood taken from a scaffold on which some convict has been hanged.
2. A pice which has been thrown over the coffin (biwán)* of an old man or woman.
3. Tiger's flesh or nail.

As soon as a child is born, the midwife takes it away from the mother, and if it is a male says a girl is born, and if a girl then says "pathar" (stone) is born. "Pathar" so used means a girl, and the knowledge of the

* [Properly the 'bier;' a corruption of Skr. विमान *bimán*. Ed.]

birth of a son is kept away from the mother for a time to prevent her feeling a sudden rapture of happiness.

The dáyí (midwife) washes the child with water put in an earthen pot (ṭhikrá), in which must be thrown some silver before the midwife would give the child to the mother. Whether this means a sort of fictitious purchase to defeat the mischiefs of witchcraft, similarly as the 'ḍhukáo' ceremony means an attack on the family of the bride and taking her away by force, (the primitive method of procuring wives), is a question which cannot be hastily answered. But it is a fact that the midwife does not give the male child to the mother until she is paid. For one day and a half the child draws no nourishment from its mother's breast. The pap must be washed by the sister of her husband, if there be any, before any nourishment can be given from it to the son. The husband's sister is paid according to means for this ceremony.

Throwing oil on the ground is the thing done on all auspicious occasions, probably to satisfy the demons of the earth. This is also sanctioned by Brahmanical ritual, and with them worship of the earth-gods to prevent the mischief of the demons inhabiting the lower strata of the earth is frequent. Oil is thrown under the bed of the mother, where green grass is also put, green grass (dúb دوب दूब) being the emblem of prosperity. It is also given by friends to the father of the new born child in congratulation of the birth of the son and indicates their good wishes to the new born.

To prevent any mischief to the child or the mother during the time of her confinement, the following precautions are taken:

I. Fire must be constantly kept in the room and should never be allowed to die out. The primitive Aryans were fire-worshippers and I think this is a remnant of their hom (होम) and other ceremonies now never practised except on marriage. The Gubars of Persia used to keep fires burning for hundreds of years, and it was most probably so in ancient India.

II. Grain must be kept near the bed of the mother. Grain represents plenty of good luck, which has a peculiar power of removing all evil.

III. Water should always remain in the room. It is the common belief that witches attack the unclean, and water being a purifier they cannot come near it. This belief is very general and is found as well in Islám as in Brahmanism. The Musalmáns have it on the highest authority that water is the purifier (اَلْمَاءُ مُطَهِّرٌ), so it is also according to Manu.

IV. Some weapon should also be placed near. It is believed that witches have no power over armed persons, but they attack the weak and the foul. It is from this belief that the bridegroom when marching at the head of a marriage procession must be armed, so that fairies being enamoured with him might not take him away. Those who are now deprived by

the Arms Act of carrying arms, carry a small knife instead, to frighten the fairies and spirits away.

V. The handle of the plough (hal dá munná) is kept under the bed. As the plough turns the soil from which grain is produced, witches do not approach such an implement.

VI. There should be a lock on the bed, or it should be chained round (bel máriá). Iron has great power of preventing the mischief of witchcraft, and a bed chained with iron is therefore quite safe.

VII. On no account should a cat be allowed to enter the room. Her cry even should not be heard by the mother. Some do not even let her name a cat (billí). The most unlucky dream for a woman in her confinement is that of seeing a cat. Some say that witches come in the disguise of a cat which should therefore not be allowed access, and others think that 'Áṭh máha' (اٹھ ماھہ), the habit of a child being born in the eighth month of pregnancy, is engendered by the fact of a cat entering the room of confinement. There are several stories in Oriental literature of sorceresses in love having gone to their beloved in the disguise of cats. I believe there is one in the Arabian Nights, but I have not got that book with me just now and cannot refer to it, and there is another in the Persian book justly called "a jewel in the necklace of a dog", for referring to which I beg to be pardoned. It is in the first part of Bahár Dánish (بہار دانش) in the 6th story related to the prince. (Compare also Æsop's Fable, No. 198). A child born during the eighth month of pregnancy is believed to die on the eighth day after birth, in the eighth month, the eighth year or the eighteenth year. When speaking of the age of a child, the number eight (áṭh اٹھہ) is called "an ginat" ان گنت (uncounted) so

ان گنت دن	an-ginat	din	= 8th day
ان گنت مہینہ	do.	mahína	= 8th month
ان گنت برھا	do.	barhá	= 8th year.

By the way I may mention here, a baby is called as many years old as he is days or months old—4 'barhe', 1½ 'barhá', &c. when applied to a small baby means that he is 4 days or 1½ months old. Returning to the unlucky pussy, if a cat happens to enter the room, ashes should be thrown over her to ward off the danger. In native sorcery, the common practice to drive witches away is by throwing enchanted grains, or ashes, or water over the object possessed, followed by the repetition of the charming words. For fairies flowers are used. For semi-gods like Hanumán and goddesses like Deví incense is burnt, and prayers substituted for charming words.

VIII. The house should not be swept clean by a broom, as this might have the effect of sweeping all the luck out of the room.

IX. There should also be no small opening for a drain (morí) in the

room of confinement. If there were it should be closed. For surely through it witches might enter, because it is from its nature unclean.

X. A lamp should be lit during night, and it should not be put out in the morning, but allowed to burn out. Putting a light out means extinguishing the light of good fortune. A son is called by the natives "Light of the house" (ghar ká díwá), for without him it would be all dark, the symbol of unhappiness.

XI. The mother and the baby must not on any account come out of the room for thirteen days. On the thirteenth day after birth, they are to come out of the room in the following manner. The mother takes a bath, and the old clothes worn by her are given away to the midwife employed, who divides them sometimes with the náin or barber woman. This náin, who is the customary maid-servant of the house, brings, in a small earthen pot (ṭhikrá), cow urine, green grass, a nut (supárá), and the "naharná" or instrument for cutting nails. After the mother has finished her toilet (which is a much simpler process than the toilet of European ladies) the 'náin' sprinkles with green grass the cow urine on her person. Incense (dhúp) is burnt and nails are cut by the barber woman, which must not be cut previous to this day. The mother must put on the barber's (náí's),—not the barber woman's but her husband's—slippers. What does it mean? Perhaps she, coming out in the shoes of a servant, may be understood by the witches and other such beings not to be the lady of the house to whom they might cause any mischief; except this I cannot conjecture any other reason. Then the mother takes the child in her arms, and walks forth out of the room. The barber woman throws some oil on the door side and the water woman (jhíwarí, or any other) stands with a pot full of water and green grass; for these they are both duly paid according to the means of the lady. In the outer room the Bidh Mátá (بیدھ ماتا), the "Vidhátá Mátá" (विधाता माता) of the learned, the goddess of generation is worshipped. The Bráhmans have no hand in this worship. The women form an idol of cow-dung (gobar), cover it with a red cloth and make their offerings to it, consisting of the food cooked for giving a feast on the occasion. It is to be observed that this is certainly a relic of the manners of those times when primitive Aryans worshipped their gods without the intervention of the priestly caste. Now, the Hindú gods would scarcely listen to prayers of the common folk, unless their cause were pleaded by the Bráhmans. Then drums are beaten, Bráhmans fed and a feast given to all the relatives present, and the members of the household congratulated. That idol is kept in the house till one and a quarter month after the day of birth and then deposited near the well.

This completes virtually all that is necessary for the proper care to be taken in the period of confinement which, however, lasts for forty days.

But the mother must not stain the palms of her hands or feet with the colour of the mahindí or ḥinná plant (*Lawsonia inermis*) and must not wear cloth coloured with kusumbha dye, until the ancestors are worshipped and a feast given to the kinsmen. On this occasion dhiyánís or the girls born in the tribe must also be fed, paid and reverenced. There is no limit of time as to when this grand feast is to be given.

Thenceforth nothing is to be feared except that dreadful goddess "small-pox." She must be periodically worshipped. Of the mode of her worship I will give a separate description; meanwhile suffice it to say that on her days and the days of her bír or follower, Tuesday and Saturday, the boy should not have a bath.

There is one other subject which I think must not remain altogether unnoticed. It is the influence of the evil eye, and what should be done to prevent the mischief caused thereby. Mothers naturally watch their sons with great anxiety. If at any time the baby refuses to take his nourishment, the first thought of the mother is, that he is under the influence of the evil eye. But to be sure whether this is so, she takes on a Saturday or Sunday *seven* red peppers, touches the person of the young one *seven* times with them, and without speaking to any one throws them in the fire. If they give out any odour whilst they burn, the baby is safe from the evil eye, but if no odour comes when the peppers burn, then it cannot be doubted that the young one has been looked at by some evil eye. If the mother, whilst touching him with the peppers, talks to any one, the charm is broken and must be done again. There is also one other method of finding this out, *viz.*, throwing dough wrapped round by cotton thread, after touching the child seven times with it, into the fire. If it burns without the threads being burnt, the boy is under the influence of the evil eye, but if the threads burn first, then the evil eye is not to be feared. This mode of ascertaining the evil eye is not so generally adopted as the one mentioned first. When it is thus found out that it is the evil eye which ails the baby, they then think out who it must be, whose eye fell on the child. Surely it can be no other than the person who stared at the child longest and who *praised* him most. Hence it is the rule with the friendly visitors not to praise the child much. If it be done so by any one, the mother or other friend of the baby takes a little earth in her hand and throws it across the child. Horse owners and dealers are also seen doing this, after some new comer has inspected the horse. When the person whose evil eye fell on the baby comes again, the child is hidden from his eye, and some earth from under the footsteps of the offending person is quietly taken and thrown in the fire. It may be observed that the native method is safer than the English which requires spilling of blood to remove the evil (see the Rev. A. Jessopp's Account of Superstition in Arcady in the Nineteenth

Century for November 1882). This will remove the influence of his eye. If it cannot be ascertained who was the person from whose look the child is suffering, recourse is had to the "cunning" man (syáná). He generally gives some charmed water with which the face of the baby and the breast of the mother is to be washed, or some charmed ashes which are applied to the forehead of the child, or anything else which he might think fit to administer. To prevent the mischief of the evil eye, the following precaution is thought to be ordinarily quite sufficient. When the child is going out, or when visitors are expected, or when he has been dressed in new clothes, his forehead or cheek is daubed with a small black mark. Anything black is believed to have the power of warding off the mischief of the evil eye. Thus they put black woollen collars (gaṇḍás) on the necks of beautiful horses, buffaloes, or oxen. It is also from this belief that those hideous black drawings representing old sorceresses, or demons, or witches, we so often see on the walls of newly built houses in the bazar, are drawn. Sometimes a picture of a black snake or fish on the wall is thought to be sufficient. I must stop here, for I have gone already far from my subject which was to give some account of the evil eye as connected with the well-being of children.

In conclusion I have to point out that the above related superstitions and beliefs are by no means peculiar to the Jáṭs of any part of the country. The description given is of superstitions prevalent amongst the Jáṭs of the Eastern Panjáb, and I have gathered the information from the most trustworthy sources, *i. e.*, from old native women. But I find that most of the above will hold good of *all* classes of inhabitants of the Panjáb with a few alterations here and there. I am informed that the Kshatrís, Bráhmans and Baniás of the towns are far more superstitious than are rural population. As to the extent to which such beliefs prevail, there are very few men who really believe in them, but there are very few women who do *not* believe in such things. So all such things are managed by women, and in most cases men do not come to know of them even.

It will appear that on the one hand some of these superstitious beliefs are the relics of old faiths and manners which have in some instances been incorporated in the modern religions, and on the other hand they are the absurd beliefs of an ignorant and credulous people. It is also manifest that the modern religions discard such superstitions. Yet all religions prevalent in the Punjáb, Hindúism, Sikhism, and Muhammadanism have failed to eradicate these superstitions, and it must be so until women are also educated and brought up like men. Truly, every candid native must confess that in India women have their own superstitious religion which does not practically differ much, whether they be nominally Hindús, Muhammadans or Sikhs.

A new find of Muhammadan Coins of Bengal (Independent Period).—By Dr. A. F. Rudolf Hoernle. (With two Plates).

In February or March 1883 a treasure consisting of 85 silver coins (Rupees) was found by some kúlís while they were working at an embankment lying to the north of Daulatpur and south of Bansígrâm in the Thana Dewan Serai in the District of Murshidábád.*

As usual the coins were forwarded to this Society for identification (on the 22nd May 1883) and thus came into my hands. The result I exhibit in the following table:

Name and Number of Sulṭán.†	Date of reign A. H.†	Description.	No. of coins.
V. Abúl Mujáhid Sikandar Sháh,	759-792	Two varieties.	2
VI. Ghiyáṣu-d-dín Abúl Muẓaffar A'ẓam Sháh,.....	792-799	.....	1
IX. Shihábu-d-dín Abúl Muẓaffar Báyazíd Sháh,.....	808-817	.....	1
X. Jalálu-d-dín Abúl Muẓaffar Muhammad Sháh,.....	817-834	.....	1
XII. Náṣiru-d-dín Abúl Muẓaffar Mahmúd Sháh I, ...	846-864	Muẓaffar type, several varieties.	28‡
		Mujáhid type, several varieties.	7
XIII. Raknu-d-dín Abúl Mujáhid Bárbak Sháh, ...	864-879	Mujáhid type, two varieties.	2
		Muẓaffar type, several varieties.	18
		Anonymous type.	25
		Total,...	85

A large number of the coins are very much disfigured by shroff-marks. Regarding the object of such disfigurement, see Blochmann's explanation in this Journal, Vol. XLIV, p. 288, footnote.

* See official letter from H. Mosley, Esq., Collector of Murshedabad to the Commissioner of the Presidency Division, No. 271 G., dated Berhampore, 10th May, 1883.

† Taken from Blochmann's Table in J. A. S. B., Vol. XLII, p. 308.

‡ One of these is broken in two pieces.

There are several circumstances which give to these coins a particular interest.

In the first place, nearly one half of the coins of Ruknu-d-dín Bárbak Sháh are entirely new. Only a very few coins of this Sulṭán have, hitherto, become known, and they are all of the *anonymous* type; while many of the coins, now found, give his full name Ruknu-d-dín. Also among the coins of Náṣiru-d-dín Mahmúd Sháh I, there are no less than six entirely new types, Nos. 3, 4, 5, 6, 7, 8, while among the four other, already known types, some give new dates, and others, being in better preservation, throw additional light on the legends.

In the second place, the present coins settle a curious point regarding the use of the so-called *kunyat* or patronymic appellation. I believe it has been generally assumed that no more than one *kunyat* could be borne by the same ruler. At least, this appears to have been the only reason for setting aside those few traces of a contrary evidence which, as I shall presently show, did occasionally crop up. But the testimony of the coins, now discovered, appears to leave no reasonable doubt on the subject that some rulers did make use of two *kunyats*. The Muhammadan histories, to judge from Blochmann's "Contributions to the Geography and History of Bengal" in Vols. XLII, XLIII, XLIV of this Journal, know of no other *kunyat* for Náṣiru-d-dín I but *Abúl Muẓaffar*, nor any other for Ruknu-d-dín, but *Abúl Mujáhid*. But the present coins show—and other evidence, as I shall presently show, confirms the fact,—that both those Sulṭáns were in the habit of using both names, *Abúl Muẓaffar* and *Abúl Mujáhid*. Whether they did so at will, or for stated reasons, I am not able to determine; but the point might be worth further investigation.

Having once recognized the fact of the use of several *kunyats*, I began to make a search for any previously recorded traces of it. Those I found I shall now enumerate, only premising that my examination was a cursory one, and that a closer search may reveal many more instances.

(*a*). In the Xth Vol. of this Journal the Hon'ble H. T. Prinsep describes a number of Muhammadan coins found in Howrah*. Among them

No. 3 is a coin of Abúl Muẓaffar Sikandar Sháh, the son Ilyás Sháh. He is commonly known by the *kunyat* Abúl Mujáhid.

No. 15 is a coin of Jalálu-d-dín Abúl Mujáhid Muhammad Sháh. He is the tenth Sulṭán of Bengal, from 817-834 A. H., and his usual *kunyat* is Abúl Muẓaffar.

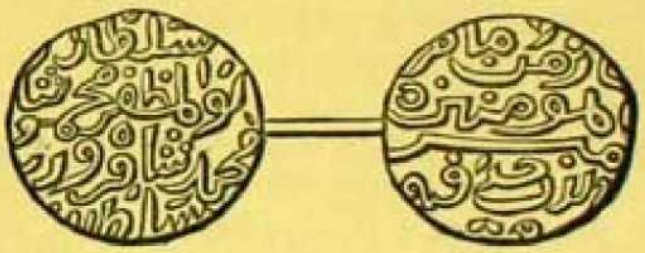
No. 25 is a coin of Saifu-d-dín Abúl Muẓaffar Hamzah Sháh, the son of A'ẓam Sháh. He was the seventh Sulṭán reigning from 800-804 A. H., and he usually bears the *kunyat* Abúl Mujáhid.

* J. A. S. B., Vol. X, pp. 168, 169.

No. 28 is a coin of Náṣiru-d-dín Abúl Mujáhid Maḥmúd Sháh. Prinsep reads "Mahomed Shah", and adds that "he appears to be Mahomed Sháh, afterwards king of Hindustán whe reigned from A. H. 627-634." This shows that his "Mahomed Sháh" is an error for "Maḥmúd Sháh". It is clear, however, from the style of the legend on the obverse, that the coin is not one of the Dehlí Emperor Náṣiru-d-dín Maḥmúd Sháh, but of the Bengal king of that name, in fact, of the same Náṣiru-d-dín Maḥmúd Sháh I, to whom the coins of the new find belong.

Unfortunately these coins were not figured, and it will perhaps not be quite safe to rely implicitly on the correctness of Mr. Prinsep's readings. If the *kunyat* Abúl Mujáhid was read correctly, his coin of Náṣiru-d-dín Maḥmúd may have been one like No. 7 or No. 12 of the present set.

(*b*). Mr. Thomas, on p. 136 of his "Chronicles of the Pathán kings of Delhí", describes a gold piece of Maḥmúd Sháh, the grandson of Fírúz Sháh, on which he reads the *kunyat* as Abúl Maḥámid. The letters, however, on the figure of the coin (his Pl. IV, fig. 143), I think, are quite susceptible of being read as Abúl Mujáhid; and still more so on a coin of Maḥmúd's father Muḥammad Sháh (Mr. Thomas' Plate IV, fig. 134).* But however that may be, there is a gold piece of Maḥmúd in the Society's collection, which clearly gives him the *kunyat* Abúl Muẓaffar, as shown



in the wood cut. It, at all events, shows that Maḥmúd assumed two *kunyats*, Abúl Muẓaffar and Abúl Mujáhid or Abúl Maḥámid, whichever of the two latter be the correct reading.

(*c*). Blochmann, in Vol. XLIII of the Journal, quotes an inscription of Bárbak Sháh, of the year 868 A. H., which gives that Sulṭán the *kunyat* Abúl Muẓaffar.† On this he observes in a footnote, that "it seems to be a mistake for Abúl Mujáhid." But there is an old Persian Dictionary, the Sharáfnámah-i-Ibráhímí which, as Blochmann himself informs us, is dedicated to Bárbak Sháh and, in the concluding verse, also styles him

* Thus the large, elongated dot over can certainly not be the "zabar" of *Maḥámid*, though it may be the worn "pesh" of *Mujáhid*. I have referred to both Badaoní and Ferishtah; but neither of them mentions the *kunyat* of Maḥmúd.

† J. A. S. B., Vol. XLIII, p. 297.

"Abúl Muẓaffar".* Blochmann suggests that the Bárbak Sháh here intended may be "the Bárbak Sháh of Jounpur who ruled in Jounpur from 879 (the year when the Bengal Bárbak Sháh is said to have died) to 881, etc." But this is not very probable. In any case, the testimony of the inscription, which is really unimpeachable, is confirmed by the coins, now found, which give Ruknu-d-dín's full name and date. Indeed, from the fact that not less than 18 coins of 4 different types (Nos. 13, 14, 15, 16) give him the *kunyat* Abúl Muẓaffar, while only 2 coins of 1 type (No. 12) style him Abúl Mujáhid, as well as from the fact that the author of the Persian Dictionary, in dedicating his work to Bárbak Sháh, addresses him by the name Abúl Muẓaffar, it would almost seem that Ruknu-d-dín preferred that *kunyat* to Abúl Mujáhid, albeit he is better known by the latter *kunyat* in the histories. Out of four known inscriptions, three call him Abúl Mujáhid, while in the fourth he is called Abúl Muẓaffar.†

(d). In Vol. XLIV of this Journal, Blochmann published a coin (his No. 8) which clearly reads Abúl Mujáhid.‡ This he himself admits; his words are: "if the last had not been found together with the others, I would be inclined to attribute it to Mahmúd Sháh II, as the *kunyat* looks more like Abúl Mujáhid than Abúl Muzaffir." Still for the reason mentioned, and under the prejudice that a king could not use two different *kunyats*, he reads Abúl Muẓaffar. Probably the same reasons prevented Blochmann from recognizing that his coin No. 3 (or fig. 4 of his Plate) also reads "Abúl Mujáhid," though the letters, in this case, are not quite so clear as in the case of his No. 8. But an imperfectly preserved "Abúl Mujáhid" can generally be almost certainly distinguished from an imperfect "Abúl Muẓaffar" by the presence or absence of the connecting stroke after the غ *ẓa* and جا *já* respectively, which otherwise have a great resemblance to each other. The difference can be very clearly seen by comparing No. 3 with No. 4 in Blochmann's Plate; the former has Abúl Muẓaffar, the latter, Abúl Mujáhid. Moreover, there is fortunately among the newly found coins one (No. 10) which is a duplicate of Blochmann's No. 3 and on which the word "Mujáhid" is clear enough. Now Blochmann's No. 3 is dated 852 A. H.; and my three specimens of No. 8, of the Mujáhid type, are dated 86[*] 862, 865. The only king with whom all these dates agree is Náṣiru-d-dín Maḥmúd Sháh I, who reigned from 846-865 A. H.; and these coins, therefore, clearly prove that Maḥmúd Sháh I made use of the *kunyat* Abúl Mujáhid as well as of the *kunyat* Abúl Muẓaffar, though in the histories he appears to be only known by

* J. A. S. B., Vol. XXXVIII, p. 8, Vol. XXXIX, p. 296, footnote.
† J. A. S. B., Vol. XLII, p. 272, Vol. XLIII, pp. 295, 296, Vol. XLIV, p. 291.
‡ J. A. S. B., Vol. XLIV, pp. 288, 289; Plate XI, fig. 9.

the latter. This being so, it becomes very probable that the coins of the same (*i. e.*, Mujáhid) type which bear no date or the date of which is no more legible, must be ascribed to the same Sulṭán Maḥmúd Sháh I. To this class belong my coins Nos. 9 and 11, Blochmann's No. 8 (his fig. 9), and the coin No. DCCXXIV published by Marsden in his *Numismata Orientalia*. The latter was republished by Laidlay in Vol. XV of this Journal.* "Both he and Blochmann ascribe it to Náṣiru-d-dín Maḥmúd Sháh II,† commonly known as Abúl Mujáhid, probably a grandson of the first Náṣiru-d-dín Maḥmúd Sháh, who is supposed to have reigned in 896 A. H. As they had not the advantage of the present evidence of dated coins, their error is not surprising; nor, indeed, in the absence of legible dates, can their ascription be said to be impossible, but probability is greatly the other way. The second Náṣiru-d-din, as Blochmann shows, can only have been about seven years old at the time of his accession; for at his father Fateḥ Sháh's death (probably in 892) he was two years old; and he was murdered after a reign of only about six months.‡ Under these circumstances there is little probability, that coins—and coins too of various types—were struck in his name. Moreover, it will be observed that the coins of the present find, are nearly all of Maḥmúd I and Ruknu-d-dín; there are only five of previous reigns, but none of any reign after Ruknu-d-dín. If the undated coins of the Mujáhid type were ascribed to Maḥmúd II, there would be a large gap in the series of coins, extending over no less than five reigns, between Ruknu-d-dín and Maḥmúd II. For this reason, too, it is more probable that the undated coins belong to Maḥmúd I.

(*e*). In Vol XLII of this Journal, p. 289, Blochmann has given an inscription of Náṣiru-d-dín Abúl Mujáhid Maḥmúd Sháh. He was unable to read the date, and ascribed the inscription to Maḥmúd Sháh II, on account of the *kunyat* Abúl Mujáhid, mentioned in it, while the *kunyat* of Maḥmúd Sháh I, as he says, was Abúl Muẓaffar. The date, however, is not so illegible as Blochmann makes it out to be. It is in all probability 847 or 849; see his Plate VII, No. 3; in the left-hand lower corner the word سنه "year" is distinct; just above it is clearly enough the word سبع "seven" or تسع "nine"; and above that, again, is the word (rather indistinct) ثمانمايه "eight hundred"; lastly to the immediate right of سنه is the word اربعين "forty"; the whole date being سبع واربعين و ثمانمايه 847 or تسع و اربعين و ثمانمايه 849. Indeed the date is so clear, that I suspect it was merely because Blochmann felt himself unable

* J. A. S. B., Vol. XV, p. 331; Plate V, No. 18.

† J. A. S. B., Vol. XLII, p. 289.

‡ See J. A. S. B., Vol. XLII, p. 288.

to make it agree with the reign of Maḥmúd II, that he thought it was illegible. The year 847 or 849 only suits Maḥmúd I, and it shows that the inscription must be ascribed to him and that he used also the *kunyat* Abúl Mujáhid. It thus appears that out of six known inscriptions of this Sulṭán, he calls himself Abúl Muẓaffar in five,* and Abúl Mujáhid in one. A circumstance which tends to confirm the ascription of the last inscription to Maḥmúd I is that it commemorates the erection of a mosque during the Sulṭán's reign (في عهد سلطان), such as could hardly have been built during the short reign of 6 months of Maḥmúd II, a boy 7 years old.

In the third place. My coin No. 8*b* is important as it fixes a new date for Maḥmúd Sháh I. The latest date hitherto ascertained, from inscriptions, was 863.† The earliest known date of Maḥmúd's successor Bárbak Sháh was *Safar* 865. Thence Blochmann rightly concluded that Maḥmúd Sháh must at least have reigned till the beginning of 864.‡ The coin, No. 8*b*, now proves that he actually reigned in the year 864.

In the fourth place. The reverse of No. 8, is noteworthy. Laidlay (J. A. S. B., XV, p. 328) says of Náṣiru-d-dín I, "being unable to record a royal paternity on his coinage, he seems to have contented himself with the simple repetition of his name and title, etc." But Náṣiru-d-dín I evidently had neither cause nor inclination to be so humble, for on the coins No. 8, he claims to be the son as well as the grandson of a Sulṭán. This claim is supported by the histories, which "agree in describing him as a descendant of Ilyás Sháh."§ May not his reverse on No. 8 show that he was actually a grandson of Ilyás Sháh, and a son of Abúl Mujáhid Sikandar Sháh ?

In the fifth place. There is a curious resemblance between my coin, No. 12, of Bárbak Sháh, and the coin of Saifu-d-dín Abúl Muẓaffar Fírúz Sháh II, published by Blochmann in Vol. XLII, p. 288. The resemblance is particularly striking in the reverse.

I now proceed to describe the coins :—

I. Abúl Mujáhid Sikandar Sháh.

Of this Sulṭán there are two coins. One belongs to the type described by Mr. Thomas in the J. A. S. B., Vol. XXXVI, p. 66, No. 26, and figured in Marsden's *Numismata Orientalia*, Plate XXXVI, No. DCCLIX. The other (Plate XVII, No. 18) is also described by Mr. Thomas, *ibidem*, p. 64,

* J. A. S. B., Vol. XLI, pp. 107, 108 ; Vol. XLII, pp. 270, 271 ; Vol. XLIII, pp. 294, 295 ; Vol. XLIV, p. 289.

† J. A. S. B., Vol. XLII, p. 269, Vol. XLIV, p. 288.

‡ J. A. S. B., Vol. XLII, p. 269.

§ J. A. S. B., Vol. XLII, p. 269.

No. 22, but not figured. The mints and dates are not legible on either of the two.

II. Ghiyáṣu-d-dín A'ẓam Sháh.

His coin is of the type figured and described by Mr. Thomas, *ibidem*, p. 69, No. 35. Mint and date illegible.

III. Shihábu-d-dín Báyazíd Sháh.

His coin is of the type figured and described by Blochmann in J. A. S. B., Vol. XLII, p. 263, No. 1. Mint illegible, date apparently 809.

IV. Jalálu-d-dín Muḥammad Sháh.

His coin is of the type figured and described by Blochmann, *ibid.*, p. 267, No. 3. Mint illegible; date apparently 828.

V. Náṣiru-d-dín Maḥmúd Sháh I.

(a). *Muẓaffar Type.*

No. 1. (Plate XVI, fig. 1). Five specimens; apparently duplicates of the coin, No. 5, described and figured by Blochmann in J. A. S. B., Vol. XLIV, p. 289, the date of which however was not legible. One of the present coins (fig. 1), now in the Society's Collection, shows the date 848; on the others it is not legible. The legends on both sides are the same as on Col. Hyde's coin, published in J. A. S. B., Vol. XLII, p. 269, No. 1.

Obv. ناصر الدنیا والدین ابو المظفر محمود شاه السلطان

Rev. المؤید بتائید الرحمن خلیفة الله بالحجت و البرهان ضرب ۸۴۸

No. 2. (Plate XVI, fig. 2). Nine specimens. The obverse legend is the same as that of No. 1, except that the word شاه is here placed below, instead of above, the word السلطان. The reverse reads:*

نائب غوث الاسلام و المسلمین خلد ملکه و سلطانه سنه ۸۵۳

One of them (fig. 2) shows the date 8[5]3 (خزانه ۸۵۳); two others are dated [85]2 and 859. The coin, No. 7, published by Blochmann, J. A. S. B., Vol. XLIV, p. 289 (fig. 8 on his Plate) is very much like the coin, now figured, in general appearance; but the latter has a double row of scollops on the obverse, while Blochmann's coin has only one row and, besides, has the words شاه السلطان placed as in No. 1 of the present series.

* The word الاسلام appears on all these coins as التلام.

No. 3. (Plate XVI, fig. 3). Five specimens; in all respects like No. 2, except that the latter are small, thick pieces, while No. 3 are large and thin with broad ornamented margins. On two specimens the dates are legible; one (fig. 3) has 860; the other probably 8[5]9.

No. 4. (Plate XVI, fig. 4). One specimen; a small thick piece, like No. 2; also with the same legends; but that on the obverse differently arranged, in a rather curious way. Date, probably on reverse, obliterated by shroff-marks.

No. 5. (Plate XVI, fig. 5). Three specimens; very crude pieces, one of them broken in two. Obverse legend as usual; the reverse entirely illegible through shroff-marks.

No. 6. (Plate XVI, fig. 6). Five specimens; with very slight variations; broad, thin pieces, like No. 3, but without any margin on the obverse. The lettered surface of the latter shows the well-known ornamental elongated strokes. The legends on both sides are the same as on No. 1. On one coin (fig. 6) the date is 847, on another apparently 84[8].

(b). *Mujáhid Type.*

No. 7. (Plate XVI, fig. 7). One specimen; in all respects like No. 6, except that the word *Mujáhid* is substituted for *Muẓaffar*. The date is 862. A similar coin was published by Laidlay in J. A. S. B., Vol. XV, Plate IV, No. 7, but its reverse legend is different, *viz.*, that of No. 2 of the present series. He wrongly ascribed it to Jalálu-d-dín Muḥammad Sháh. Blochmann appears to have read on it Abúl Muẓaffar, but the name is exactly as on my coin, and is clearly Abúl Mujáhid.

No. 8. (Plate XVI, figs. 8*a* and 8*b*). Three specimens; in general appearance, like Nos. 6 and 7; the obverse legend is also the same, but the reverse has the following inscription of which the latter portion is continued from the area on to the margin:

in margin — in area

خلد الله ملكه و سلطانه — السلطان ابن السلطان ابن السلطان ضرب ٨٦[٤]

They are all dated; one has 862, another (fig. 8*b*) has 864, the date of the third (fig. 8*a*) is mutilated 86[*].

No. 9. (Plate XVII, fig. 9). One specimen; in general appearance like No. 2; both legends also the same as on No. 2, except that the word *Mujáhid* is substituted for *Muẓaffar*. The date which would have been on the reverse margin is unfortunately lost. The coin, No. 8, published, by Blochmann, in J. A. S. B, Vol. XLIV, p. 289 (fig. 9 of his Plate) appears to have been identical with the present one. He makes the legend

on the reverse to be the same as on Col. Hyde's coin (*i. e.*, the same as on No. 1 of the present series); but this is clearly an error; for his coin shows distinctly the word و المسلمين, and on my coins both words اسلام and مسلمين can be made out. But it should be noted that the inscription is distributed over area and margin, as in No. 8, thus:

in area	in margin
نائب غوث الاسلام و المسلمين خلد	ملكه و [سلطانه ضرب * *]

No. 10. (Plate XVII, fig. 10). One specimen; similar to No. 9, but the lettered surface of the obverse is ornamented with elongated strokes. Both legends are the same as on No. 9, but the reverse legend is differently distributed over area and margin, خلد الله ملكه و سلطانه being in the area, and the rest in the margin. This coin is evidently a duplicate of coin, No. 3, published by Blochmann, in J. A. S. B., Vol. XLIV, p. 288 (fig. 4 on his Plate). On the present specimen, the word *Mujáhid* is quite distinct, while Blochmann's coin supplies the date (852) which is illegible on mine.

No. 11. (Plate XVII, fig. 11). One specimen; a broad thin piece, in general appearance like No. 3, but with different ornaments on the margins, and a different legend on the reverse area. The latter is the same as on No. 1, while the legend of No. 3 is the same as on No. 2. Unfortunately the date is illegible.

VI. Rukn-d-dín Bárbak Sháh.

(a). *Mujáhid Type.*

No. 12. (Plate XVII, fig. 12). Two specimens; broad, thin pieces, with lettered surfaces only; the legends being:

Obv. السلطان ركن الدنيا و الدين ابوالمجاهد باربكشاه السلطان ابن محمود شاه

Rev. لا اله الا الله محمد رسول الله خزانه ٨٧٤

Dates of both, 874.

(b). *Muẓaffar Type.*

No. 13. (Plate XVII, figs. 13*a* and 13*b*). Eleven specimens; in general appearance like No. 11; large thin pieces, with two areas and two broad ornamented margins. The legends on the areas are:

Obv. ركن الدنيا و الدين ابو المظفر باربكشاه السلطان ابن محمود شاه السلطان

Rev. The same as on Nos. 1 and 11.

The following dates can be recognized: 867, 870 (on fig. 13*a* ٨٧٠ خزانه), 871, 875, 877. The last date is indistinct and might be 867. One specimen (fig. 13*b*) shows very clearly 827 (٨٢٧ بالربع), though there can be no doubt that the 2 (٢) is either a mistake for 6 (٦) or a badly executed 7 (٧). The words preceding the dates seem to be خزانه "treasury", and بالربع "with the fourth".*

No. 14. (Plate XVII, fig. 14). Two specimens; a slight variety of No. 13, the و of الدين on the obverse commencing the second line of the legend, while on No. 13 it ends the first line. The date is just recognizable as 878. There is no trace of any margin, but they are probably clipped away.

No. 15. (Plate XVII, fig. 15). Three specimens; another slight variety of Nos. 13 and 14, the و being placed as in No. 14, and the last word السلطان being written on the same line with ابن محمود شاه instead of below it, as in Nos. 13, 14. Observed dates 867 (on fig. 15) and 877.

No. 16. (Plate XVII, fig. 16). Two specimens; a variety of No. 15, the letters, especially on the reverse, being much larger and coarser. Date and margins clipped away.

(c). *Anonymous Type.*

No. 17. (Plate XVII, fig. 17). Twenty-five specimens; exactly like the coin, figured and described by Marsden in his *Num. Orient.*, Plate XXXVIII, No. DCCLXXV. Among them there are 16 dated 873, two dated 872 and one dated 870. The dates of five are illegible; and one (fig. 17) seems to show 761 twice! The words preceding the dates are, on some خزانه (on fig. 17), on others بالربع.

All the coins figured on Plates XVI and XVII are now in the Society's collection, except the coin of Sikandar Sháh (Pl. XVII, fig. 18) which is in my possession. In the Society's collection are the following coins: 2 specimens of No. 1 (d. 848); 4 of No. 2 (d. 852, 853, 859); 4 of No. 3 (d. 859, 860); 1 of No. 4; 1 of No. 5; 3 of No. 6 (d. 847, 848); 1 of No. 7; 2 of No. 8 (d. 864, 86*); 1 each of Nos. 9, 10, 11; 1 of No. 12 (d. 874); 13 of No. 13 (d. 867, 870, 871, 875, 877, 827). In my own possession are the following; 1 specimen of No. 1 (d. 8[48]); 1 of No. 2 (d. 859), 1 of No. 3 (d. 8[5]8); 2 of No. 6 (d. 857); 1 of No. 8 (d. 862); 1 of No. 12 (d. 874); 2 of No. 13 (d. 867, 870).

* On the ربع or land-tax of the fourth; see Blochmann in J. A. S. B., Vol. XLII, p. 219.

On Stone Implements from the North Western Provinces of India.—By J. H. Rivett-Carnac, Esq., C. S., C.I.E., F.S.A., &c.

(With three Plates.)

The Proceedings of the Asiatic Society for January 1882 contain a short account of a collection of stone implements, made during the past few years by Mr. J. Cockburn and myself in the Banda District of the the North Western Provinces of India.

It is now proposed to describe the collection more in detail, noticing specially what are believed to be the new types brought to light, together with certain specimens which appear to carry with them the explanation of the manner in which they were manufactured and hefted.

The division of labour between Mr. J. Cockburn and myself has been arranged as follows: The larger stone implements, *i. e.*, the hammers, ringstones and the celts of well known types, many of which have been found or collected during my tour, are to be described by me. Mr. Cockburn has undertaken to figure and describe at length, in a separate paper, the very large, varied and most interesting collection of chert implements which he has found, comprising many new types, none of which had been before found in this part of the country, and to which he has devoted the attention of a careful and enthusiastic observer.

The more rare and interesting of the specimens described by me have been carefully drawn to scale, and will be found figured among the illustrations which accompany this paper.

Even to those who have no knowledge of India, the locality of these finds may be easily indicated on the map, by taking as a starting point, Allahabad, the great city at the confluence of the Ganges and the Jumná. For hundreds of miles the huge tract between these rivers, together with the adjoining country beyond, consists of a level plain of alluvial soil containing few trees, beyond the artificially planted groves of the villagers, and no trace of stone save the nodular limestone locally known as kunkur. Some 10 miles to the west of Allahabad, the point where not only the two great rivers meet, but also where the Railway from Bombay and Jabalpur joins the main line of the East Indian Railway, the country suddenly changes, and rock, hill and jungle assert themselves for the first time, extending thence to the south and east for hundreds of miles, through a but little known country towards Kaṭak, and following the Railway line west during its whole course, to within a short distance of Bombay itself.

The Banda District is situated on the eastern boundary of this tract, and is entered by the Railway about twelve miles after leaving Allahabad.

In nearly all its characteristics, Banda differs from its sister Districts of the Doab. The country is hilly and well wooded, and the monotonous level of the plain is exchanged for pleasant valleys and picturesque upland.

The rocks most commonly met with, are the Kaimúr Sandstones, granatoid gneiss, diorite, the hornblendic rock, of which the celts later to be noticed, are chiefly formed, and the basalt of the trap sheet of the Deccan, veins of which intrude themselves here and there among the more common formations. In the south of the district the lower Vindhian formation, known as the Tirhowan Limestone, is met with. This is the matrix of the chert nodules and bands, the material used for the smaller and more delicate implements, the description of which will be found in Mr. Cockburn's paper.

This wild and picturesque country, lying within easy reach of that old established centre of Aryan civilization, Prayág, the "Sangam" or sacred junction of the two holy streams, having been familiar to the Hindús for many centuries, has enjoyed great popularity, and has been invested with a full share of romance by the Aryan invaders, whose appreciation of the picturesque nooks and cool retreats of the upland, must have been enhanced by a long and tedious progress through the monotonous plains of Upper India. It was in the Banda District that Ráma, having resigned his kingdom in filial deference to his father's vow, and accompanied by Sítá, and his brother Lakshman, took up his abode, choosing the wild forest which then covered the hill of Chitrakúṭ, or Kámadagiri, or "abode of delight," a site now marked by hundreds of temples, the annual resort of hundreds of thousands of pilgrims. Some of the most beautiful passages of the Rámáyan describe the picturesque forest, and this pleasant country among the Banda hills, into which civilization has not even yet fully penetrated or robbed of its many sylvan attractions. It was in this forest that Sítá was carried off by Rávaṇa, and it was here that Ráma undertook the avenging expedition against Lanka, during which, as tradition has it, he received valuable assistance from the monkeys of the forest, or in other words from the wild tribes inhabiting this tract, who were probably armed with the stone hatchets and the stone clubs which form the subject of the present paper.

The hill country of which Banda forms the eastern limit, still contains semicivilized tribes, differing in their language, in their physical and other characteristics from the Aryans of the plains. The old Hindú records contain accounts of these wild men of the woods, and the ancient stone carvings, occasionally found among the ruined temples of the forest, or on Buddhist topes like Sanchi, represent a class easily distinguishable in form and feature from the Aryan invaders. A carving found by Mr. Cockburn at Kálanjar, evidently of great antiquity, represents a figure holding in the

right hand an implement which closely resembles a stone celt fixed in a wooden handle. Likewise one of the most interesting of the Sanchi carvings figured by Mr. Fergusson, in his well known work on Tree and Serpent Worship, represents, what is believed to be, a Dasyu with an axe fixed on to the handle by cross bands, in a manner in which it is known this stone implement was hafted. There would then seem reason to believe that the stone implements found in the wild country of Banda are the remains of aboriginal tribes of India, who driven out from the fertile delta, by the wave of invasion from the North, sought refuge in the hills and jungle, in the manner that the aboriginal tribes of Britain are known to have receded to the hilly country of the island before the Saxon and the Dane.

All over the immense jungle tract of Central India, Cromlechs, Kistvaens, stone circles closely resembling those to be found in Britain and on the continent of Europe are to be found. The similarity between the stone implements, now to be described, and those of Europe, is equally remarkable, and there would seem to be little doubt, that these implements were long, and up to a comparatively recent date, in use amongst these tribes, who have as yet made little progress in civilization.

So far as I have yet been able to learn, none of these implements have been found in use at the present day, even among the most backward of these tribes. No one I have met with on my tours had been able to explain the use of any of these implements. They are regarded as wonderful, mysterious, often as holy. Turned up by the plough at some depth below the soil, the celt is supposed to be a thunderbolt, driven deep into the earth from on high, and the finder places it under the village pipul tree, sometimes sanctifying it with a daub of red paint, and constituting it a Mahadeo or Phallus. Stone implements, especially the smaller ones, flakes and arrowheads, have been found by European officers on the surface of the soil, or in the beds of streams, and notably by Mr. Cockburn, on what would appear to be the sites of old manufactories or encampments. But the village peepul tree is generally the best and surest find. There the villagers, acting unconsciously as valuable coadjutors in the interests of Archæological research, have collected together, and piled up from time immemorial, these curious relics of a bye-gone age, preserving them with that mysterious awe that attaches in their eyes to everything that is old and rare. Save perhaps to what may be the largest and central celt, daubed with red paint, and from its shape worshipped as a Mahádeo, and which they will not part with, the villagers attach no more importance to these implements left there for centuries, than to the other piles of offering stones which surround a jungle shrine. A little good-humoured persuasion, or a few rupees will easily secure them for the collector of antiquarian relics.

Some idea of the abundance of these implements on these shrines may

be formed, from the fact that Mr. Cockburn assisted by the headmen of the village, secured 23 celts in the village of Phuppoondee, Angassie Pergunnah, in about an hour's search. Probably twice this number remained hidden in the great heaps of fragments of sculpture and waterworn pebbles which were not searched.

The number collected by Mr. Cockburn and myself, in this manner, exceeds many hundreds, of all sizes, and of many different types, most of them from the weather-worn condition of the surface, exhibiting undoubted proofs of great age.

In my former papers, read before the Asiatic Society, the practice of objects of antiquarian interest, with which India abounds, being collected and disposed of by amateurs has been strongly condemned. It seems right, therefore, to mention here that no specimens have been kept by either Mr. Cockburn or myself. The best specimens have all been presented to the British Museum, where I am glad to be able to add they have been accepted by the Trustees, and recognised as forming a collection of unusual interest. Casts of the unique specimens have been made for the chief Museums of Europe, America and the Indian Presidency towns, and complete sets have been prepared and presented to these Museums and also to many gentlemen interested in prehistoric research, with a view to comparison with well known European and American types. It is gratifying to notice, that this action has already borne good fruit in the interest that has been awakened in these remains of ancient India, and the Asiatic Society will, I hope, at least consider, that no bad use has been made of this large and varied collection we have been fortunate enough to have made with the assistance and encouragement received from the Society. Several presentations of European prehistoric remains that have been received in exchange have been presented to the India Museum, after having been exhibited before the Society.

Hammer Stones.

The first specimen to be described (Plate XVIII, fig. 1*a*, *b*) is a hammer believed to be of a type unique in India. It was found at Alwara 2 miles north of the Jumna, and 37 miles south-west of Allahabad. This village is actually in the Futtehpore District close to the boundary of Banda. It was found by Mr. Cockburn, placed together with a number of other stones under a sacred tree, and was obligingly given to him, on its nature being explained, by the Thakur who owns the village. It is figured in Plate I. This hammer is of a tough, greyish quartzite and measures 3·50″ in length by 2·10″ in breadth and 1·80″ in thickness. In form, it somewhat resembles a modern hammer, being flat at the ends and slightly curved on the upper surface. A groove ·50″ in width and ·15″ in depth has been carefully carried

round the centre in a manner which is best shown by the accompanying sketch. The base has been hollowed out with equal care in a gouge like form, to the depth of about ·13 of an inch. The whole arrangement suggests that the hammer was attached by a ligature to a wooden or withy handle, the ligature being kept in its place by the upper groove, while the lower groove held the hammer in position on the rounded haft, in a manner somewhat resembling the annexed sketch. Mr. Cockburn has pointed out certain minute marks, especially on the lower groove, which suggest the possibility of metal implements having been used in the fashioning of the hammer, and it may be that this implement belongs to the transition stage from stone to metal, when metal, though available, was scarce. The arrangement for hafting the hammer, closely resembles that described by Dr. C. Rau, in his account of the Archæological collection of the Smithsonian Institution, Washington, U. S. America, a copy of which he has recently been good enough to send me. This description of the manner of hafting the grooved axes, extracted below, applies equally to the handling of the hammer, and figs. 78 and 79 of the Smithsonian catalogue strongly resemble the Indian specimen now described.

"Owing to their frequency these implements may be counted among "the best known relics of the aborigines and especially in the rural dis- "tricts of the older states. Indian stone tomahawks are familiar objects. "In general they can be defined as wedges, encircled by a groove, usually "nearer the butt end than the edge. The groove served for the reception "of a withe of proper length which was bent round the stone head till "both ends met when they were firmly bound together by ligatures of "hide or some other material. The withe thus formed a convenient han- "dle."

The specimen now figured is it, is believed, the first of this description found in India. It is now in the British Museum, casts having been supplied to several of the leading Museums, including the Indian Museum Calcutta.

The collection contains several other grooved hammers of a less perfect form, bearing no trace of metallic tooling. They appear to be water-worn pebbles, which have been grooved to admit of being attached to a withy handle.

The next specimen, Fig. 2, which I take to be a hammer also, is quite unlike any of those figured in the Catalogues of the European and American Museums that have yet reached me, though it is approached by a Scandinavian hammer, to be noticed later, and is of a type not hitherto found in India. It is a cubical mass of basalt measuring 2·50″ each way. On each of its six sides is a hole or depression about 1″ in diameter and ·25″ in depth. The whole form is not unlike an astragalus, or die of the ancients, and will

best be explained by fig. 2. The implement fits conveniently into the hand, the depressions affording a hold for the fingers, and suggesting its use as a many-sided hammer, the faces of which were changed from time to time when the pit became inconveniently deep for use. Somewhat similar depressions may be noticed on the iron mauls used by masons in the present day. The hammer, together with two celts, was found in the Banda District, embedded in the roots of a pipal tree, which in the course of years had overgrown them, and the specimens were cut out with some difficulty. "Nilsson's Scandinavia" contains a sketch, Plate I, No. 5, of a many-sided hammer of a somewhat similar form.

A flat red quartzite pebble is figured in No. 3. It measures 4·25″ in length by 3″ at the widest part, and is only 1·75″ thick. The two ends are slightly flattened as shown in the engraving. The upper and lower sides exhibit a double groove or notch for the purpose of securing it to a wooden handle. On the upper and lower surfaces double cup-marks or depressions measuring about ·70″ in diameter and nearly ·50″ in depth. The cup-mark depressions are not easily accounted for. Mr. Cockburn is inclined to think that they represent the process of forming a complete groove round the stone, which has been left unfinished. To me the design appears complete, and it would seem as if the end had, at one time, been used for hammering, whilst, at some other time, the cup-like depressions had been utilised. Possibly similar implements, found in other parts of the world, may have been already described and explained.

Fig. 4 is a nearly circular piece of sandstone measuring 3·50″ in diameter and 2·25″ in thickness. The upper and lower portions which were originally flat, show a circular depression 1·60″ in diameter and ·50″ deep. The sides have been grooved to a depth of ·25 of an inch. This implement may have been used as a hammer, for though now somewhat broken, it fits comfortably enough into the hand. Or, as suggested for stones of a similar type, it may have been a sort of rest or stone anvil, on which flint cores were split and worked Implements of a somewhat similar description were found by Major Mockler in Baluchistan.

Fig. 5 represents a curiously wrought piece of basalt 3·50″ in length and 3″ in diameter. It bears the appearance of having been split in two, either by accident or design. A deep but narrow groove runs through the centre, as shown in the sketch. Mr. Cockburn considers it a type of implement resembling the single Bola, or modern slung shot, and supposes the groove to have been intended for the reception of a thong. Mr. Cockburn found a carved figure at Kalinjar, bearing in its hand an implement which he considers resembles that now described. At the back the stone is a small but curious depression, hardly large enough to have been produced by hammering. I am unable to suggest any explanation of its use.

Fig. 6, *a*, *b* of which outline and section are given is a mace-end, or ring stone of a type well known in Europe, and of which several specimens have already been discovered and described in India by Messrs. Ball and others. The specimen in question is of quartzite and measures 5·50″ in diameter and 2·50″ in thickness. The central hole is 2·30″ in diameter. On either surface, towards the centre it narrows, in the manner shown in the section, and characteristic of the working of the implements of this description found both in India and in Europe.

Many examples of the type are to be found figured by Evans and others in their works on stone implements. Perfect specimens in some numbers have been found by Mr. Cockburn and myself, besides a large number of fragments. The perfect specimens are generally found under trees, deposited there together with celts, but numerous fragments have been picked up at the base of hills, on the Kymore plateaux, or in ravines, together with fragments of celts and flint chips and other indications which usually mark the sites of ancient encampments. Large round pebbles with the drilling of the central hole, in a more or less imperfect state, have also been found in considerable numbers, indicating that the process was troublesome and lengthy. Some exhibit a deep cup-mark or depression on either side, others on one side only. They closely resemble the hammer stones found in Europe and America, and figured in the various works on the subject. In many of these cases, it seems doubtful whether it was intended to perforate the stone, which fitted conveniently enough into the hand as a hammer.

Fig. 7 is a four-sided block of diorite 11″ in length 2″ in breadth and 2″ in thickness. At about 3″ from the end it has been ground to a rough point. The implement bears all the appearance of having been used as a pick or hoe, and is well adapted for grubbing out roots or digging out holes. I was originally inclined to think that this instrument may have been a stone ploughshare, such as might well have been used in a rude state of culture. The fact of the point being unsymmetrical, and the right side exhibiting a greater amount of wear than the left, favours this idea.

Plate XIX, fig. 8 is a long tapering well rounded piece of diorite, measuring 9·50″ in length 2·60″ in diameter at the base and 1″ at the top. It bears from top to base the marks of the chipping by which it has been worked into its present state. The implement has all the appearance of having been used as a pestle for pounding grain or other substances. It may possibly have been used as a stone club, like those of the Merai of the New Zealanders, but is rather short for such a purpose.

An ill-shaped rough polygonal block of tough sandstone measuring 50″ in length by 8″ in breadth and 325″ in thickness will be seen No. XVIII in the collection in Plate XX taken from a photograph. It has not been

separately figured. On the sides it has four depressions or holes of an inch in diameter and ·80″ in depth. It fits comfortably into the hand, and the projection at the top is convenient for the thumb and forefinger. It would appear to have been used as a hammer in the same manner as fig. 2 in Plate XVIII. The holes seem well adapted for the narrow conical ends of some of the celts, many of which bear the marks of hammering on the narrow end.

Lastly, before passing to the celts, by far the most numerous class in the collection, some curious and mysterious stones, found in considerable numbers and one of which is figured No. 9, have to be briefly noticed. The only suggestion I can make in regard to them is that they had possibly been used as pivots. It is possible that similar stones may have been found in other parts of the world, and that the sketch may be recognized, and the use of the implement explained by some of my correspondents into whose hands copies of this paper will pass.

Some specimens were picked up in situ by Mr. Cockburn about 1 mile north of the fortress of Bijaygarh, on a stony plateaux that has yielded fragment of celts and chert implements, by which it might be inferred that they were of considerable antiquity.

Celts.

Celts similar in form to those of Europe and America have, as already stated, been found by Mr. Cockburn and myself in very large numbers. It is possible that their preservation is partly to be attributed to their form, which admits of their being accepted as representing the Mahadeo or Phallus. Many have doubtless been ploughed up, but the rainfall in this upland country has cut up the soil into innumerable water-courses and ravines, and this together with the constant denudation of the soil has left exposed many implements which would otherwise have long lain hidden beneath the surface. Besides those collected under trees, many celts have been found on the surface of the soil, possibly not far from the positions in which they had originally been lost. Numbers have been picked out of gravel heaps stacked on the sides of roads. Altogether, including those we have purchased from natives, who have been employed in the search, the number of celts collected by us exceeds 400.

The largest of these is 12″·25 in length by 4″·70 in breadth, weighing 8lbs. 3oz. "The smallest is 2″·50 in length by 2″·15 in breadth, and weighs 3¾oz." The stone selected for the celts is, in the case of the polished ones, diorite of varying degrees of fineness, in some cases nearly approaching porphery. A perfectly distinct type, roughly chipped, are of hard black basalt. As a rule while those of the one class are thick and show an ovate section, the basalt celts are comparatively flat. The basalt weathers differently from the diorite. In rare instances celts of polished sandstone have occurred. The great mass of implements of this material are exceedingly rough pro-

ductions, in hard quartzite somewhat resemble Messrs. Bruce and Fooles specimens from Southern India. They have not, however, yet been found in positions which would admit of their being classed as palæolithic types, though it is quite possible that they may be of an older type than the polished celts.

In material, in shape, and in manufacture the polished and chipped celts of the first two classes closely resemble those found in various parts of Europe, America and Australia. This is the verdict of all the Museums to which they have been sent.

The Count de Limur, the distinguished French Antiquarian, assures me in a recent letter, that those sent to him, so closely resemble the celts dug out of the tumuli of Carnac and other parts of Brittany preserved in the Museum of the Hotel de Limur, that had the latter not all been marked, he would not have been able to distinguish the one from the other.

The collection may be considered under the classification adopted by Evans: 1st, The chipped or rough hewn celts. 2nd, The polished celts.

Class I. Rough hewn celts of basalt may be further subdivided into three types. (A.) Heart-shaped or cordate, rather an uncommon type, the edge alone highly polished, and so much rounded as to be almost semicircular. In many cases inequalities of the chipping have been partially removed, but in no case has the implement itself been entirely polished. (B.) Lanceolate. Long and comparatively narrow and coming to a point at the end, resembling the arrow-heads termed "leaf-shaped" in European collections. The side edges have the appearance of being serrated, owing to flakes having been taken off alternate sides. (C.) Very flat and almost triangular in shape. Implements of all these types will be observed in Plate XX which is taken from a photograph.

A rough unfinished celt is given in Plate XIX, figure 10. Fig. 11 represents one of the largest, whilst fig. 12 is a selected specimen of the flat triangular type.

The collection includes a broken basalt celt with a well defined shoulder indicating that this class of implement was handled.

One or two small basalt celts with the greater portion of the surface polished have also been found as far south as Dudhi in South Mirzapore. They are about the length of an average forefinger and fit in between the finger and thumb, and resemble in shape and size a jade knife, from the lake dwellings of Constance, which the distinguished Dr. Fischer was recently good enough to send me. The latter specimen is now in the collection of the Indian Museum and may be compared with the Indian types.

Fig. 13 shows an outline drawing of the largest of the polished celts, its length being 12″·25 by 4″·70 in breadth, and the weight 8lbs. 3oz. It is difficult to conceive how it could have been hafted, so huge are its

separately figured. On the sides it has four depressions or holes of an inch in diameter and ·80″ in depth. It fits comfortably into the hand, and the projection at the top is convenient for the thumb and forefinger. It would appear to have been used as a hammer in the same manner as fig. 2 in Plate XVIII. The holes seem well adapted for the narrow conical ends of some of the celts, many of which bear the marks of hammering on the narrow end.

Lastly, before passing to the celts, by far the most numerous class in the collection, some curious and mysterious stones, found in considerable numbers and one of which is figured No. 9, have to be briefly noticed. The only suggestion I can make in regard to them is that they had possibly been used as pivots. It is possible that similar stones may have been found in other parts of the world, and that the sketch may be recognized, and the use of the implement explained by some of my correspondents into whose hands copies of this paper will pass.

Some specimens were picked up in situ by Mr. Cockburn about 1 mile north of the fortress of Bijaygarh, on a stony plateaux that has yielded fragment of celts and chert implements, by which it might be inferred that they were of considerable antiquity.

Celts.

Celts similar in form to those of Europe and America have, as already stated, been found by Mr. Cockburn and myself in very large numbers. It is possible that their preservation is partly to be attributed to their form, which admits of their being accepted as representing the Mahadeo or Phallus. Many have doubtless been ploughed up, but the rainfall in this upland country has cut up the soil into innumerable water-courses and ravines, and this together with the constant denudation of the soil has left exposed many implements which would otherwise have long lain hidden beneath the surface. Besides those collected under trees, many celts have been found on the surface of the soil, possibly not far from the positions in which they had originally been lost. Numbers have been picked out of gravel heaps stacked on the sides of roads. Altogether, including those we have purchased from natives, who have been employed in the search, the number of celts collected by us exceeds 400.

The largest of these is 12″·25 in length by 4″·70 in breadth, weighing 8lbs. 3oz. "The smallest is 2″·50 in length by 2″·15 in breadth, and weighs 3¾oz." The stone selected for the celts is, in the case of the polished ones, diorite of varying degrees of fineness, in some cases nearly approaching porphery. A perfectly distinct type, roughly chipped, are of hard black basalt. As a rule while those of the one class are thick and show an ovate section, the basalt celts are comparatively flat. The basalt weathers differently from the diorite. In rare instances celts of polished sandstone have occurred. The great mass of implements of this material are exceedingly rough pro-

ductions, in hard quartzite somewhat resemble Messrs. Bruce and Fooles specimens from Southern India. They have not, however, yet been found in positions which would admit of their being classed as palæolithic types, though it is quite possible that they may be of an older type than the polished celts.

In material, in shape, and in manufacture the polished and chipped celts of the first two classes closely resemble those found in various parts of Europe, America and Australia. This is the verdict of all the Museums to which they have been sent.

The Count de Limur, the distinguished French Antiquarian, assures me in a recent letter, that those sent to him, so closely resemble the celts dug out of the tumuli of Carnac and other parts of Brittany preserved in the Museum of the Hotel de Limur, that had the latter not all been marked, he would not have been able to distinguish the one from the other.

The collection may be considered under the classification adopted by Evans: 1st, The chipped or rough hewn celts. 2nd, The polished celts.

Class I. Rough hewn celts of basalt may he further subdivided into three types (A) Heart-shaped or cordate, rather an uncommon type, the edge alone highly polished, and so much rounded as to be almost semicircular. In many cases inequalities of the chipping have been partially removed, but in no case has the implement itself been entirely polished. (B.) Lanceolate. Long and comparatively narrow and coming to a point at the end, resembling the arrow-heads termed "leaf-shaped" in European collections. The side edges have the appearance of being serrated, owing to flakes having been taken off alternate sides. (C.) Very flat and almost triangular in shape. Implements of all these types will be observed in Plate XX which is taken from a photograph.

A rough unfinished celt is given in Plate XIX, figure 10. Fig. 11 represents one of the largest, whilst fig. 12 is a selected specimen of the flat triangular type.

The collection includes a broken basalt celt with a well defined shoulder indicating that this class of implement was handled.

One or two small basalt celts with the greater portion of the surface polished have also been found as far south as Dudhí in South Mirzapore. They are about the length of an average forefinger and fit in between the finger and thumb, and resemble in shape and size a jade knife, from the lake dwellings of Constance, which the distinguished Dr. Fischer was recently good enough to send me. The latter specimen is now in the collection of the Indian Museum and may be compared with the Indian types.

Fig. 13 shows an outline drawing of the largest of the polished celts, its length being 12″·25 by 4″·70 in breadth, and the weight 8lbs. 3oz. It is difficult to conceive how it could have been hafted, so huge are its

proportions. The original polish has not preserved it from the effects of the weather, during, perhaps, several hundreds of years, and the stone is corroded and pitted on the surface, the material being fine-grained diorite.

Fig. 14 a polished celt, much weathered is, from its shape, one of the most interesting in the collection. It is 7·5″ long by 3·50 broad. On either side is a shallow cup-mark or depression, resembling the depressions of the celts found in Europe. It is remarkable as having two notches about half the distance from the cutting edge. These were evidently made for the purpose of binding it to a handle, and the opposite directions of the planes of the notches indicate that the binding was carried round and round. In Evans' "Stone Implements," p. 9, a similar celt from India is noticed as being in the possession of Genl. Pitt-Rivers. The Banda specimen was found in a village about one mile from Kirwee.

The implement illustrated in fig. 15 is a battered and expended celt of a fine-grained diorite, approaching basalt. On either side is a large oval-shaped depression, suggesting that the stone, first used as a celt, was utilized subsequently as a hammer. Evans in his Ancient Stone Implements of Great Britain, fig. 207, notices that in England, it is by no means uncommon to find portions of polished celts, which, after the edge has by some means been taken away, have been converted into hammers. The specimen now figured, closely resembles fig. 168 in Evans' volume already noticed.

Fig. 16 is a polished celt of diorite, from Robertsgunge in the Mirzapore District, and differs entirely in shape from the celts already figured. The side view closely resembles fig. 67 of Evans' work, a celt found in the bed of the Thames, London. It has been blunted at the top, and is almost round in section until within an inch and a half from the base, where it expands slightly, as shown in the sketch. From its cylindrical form it more closely resembles a village Mahadeo, and this may account for its having been found on a shrine so far east as Robertsgunge. The habit of preserving celts under trees is not general in the Mirzapore District, although celts must be quite as abundant as in Banda, for Mr. Cockburn and a friend, who searched together, found five in a circuit round Kandakote. Two of these are of a square type not yet obtained in Banda.

The collection comprises several long chisel-shaped celts and a vast number of tiny immature implements of the same shape as the larger celts figured. The latter may either have been hafted or used between the fore-finger and thumb. The diorite when ground and polished takes and preserves, under rough usage, a perfect edge. One of the smaller ones that has been fixed into a handle of staghorn, after the manner of those found in the Swiss Lake dwellings, has been sharpened, and I can testify from experience, chops wood nearly as efficiently as a small iron axe.

The subject will be continued in a later number of the Journal.

Notes on the History of Orissa under the Mahommedan, Marátha, and English rule.—*By* John Beames, B. C. S.

[These notes were written as Chapter II of a manual of the district of Balasore, of which I was Collector from 1869 to 1873. The work when completed was laid before Sir R. Temple (then Lieutenant-Governor of Bengal) in 1875; but for certain reasons which cannot be here stated, was not printed. In 1877 I was asked by Mr. Blochmann, then Secretary to the Society, to allow him to print the historical portion in the Society's Journal. I was unable to comply with his request at that time, and the work was put aside. Recently being engaged in some researches regarding the history of my present official charge, the Burdwan Division, I have had occasion to refer to it, and as I do not know of any compilation which gives all the facts therein contained, I have thought that it may be useful to print it.]

There is some reason for believing that for many centuries the country between the Kansbans and the Subanrekha was totally uninhabited, and covered with jungle. The legends of the Oriya race render it probable that they came into the province through the hills and down the Mahanadi, and the characteristics of their language lead me to believe that they broke off from the main stream of Aryan immigration somewhere about Shahabad and Gya. That they are not an offshoot of the Bengalis is proved by the fact that their language was already formed as we now have it, at a period when Bengali had not yet attained a separate existence, and when the deltaic portion of Bengal was still almost uninhabited. So that in fact they could not have sprung from the Bengalis, simply because there were then no Bengalis to spring from.

Numerous as are the allusions in early Oriya history to the north-western and western parts of India, and frequent as were their expeditions to the south, it is remarkable that there is nowhere in all their annals more than an obscure occasional mention of Bengal, and then even as a far-off inaccessible place. The similarity between the languages is not by any means so great as some Bengali writers have sought to make out, and what similarity there is, is due to the fact that they are both dialects of the eastern or Mágadhi form of Prákrit.

The ancient sovereigns of Orissa were great builders and employed stone in their works. As the province is not deltaic, but high and rocky, these stone buildings would last for ages, and in fact central and southern Orissa are full of them. Now it is a remarkable fact that in all northern Balasore from the Kansbans to the frontier of Bengal there is not a vestige of a single fort, temple, palace or bridge that can be traced or attributed to any older period than the sixteenth century. It is hardly possible that if this part of the country had been inhabited, the kings and rich men who so lavishly spent their wealth in the rest of the province on temples and

forts, should not have erected a single stone building in a place where stone abounds.

An additional argument for my view is derived from the existence of numerous tenures of a kind originally granted for the purpose of clearing and settling forest land. These tenures, so numerous in northern Balasore, are hardly known south of the Kansbans except in the hills.

I may also point to the very large number of villages whose names begin with the word "Ban" = forest, including according to one derivation Balasore itself, (*i. e*, Baneshwara, forest-lord,* Sanskrit Vaneśwara) and to the very marked prevalence of the Kole or aboriginal type among the lower classes.

Stirling's account of Orissa has been long in print, and is so well known, that it would be superfluous to repeat what is there said about the various dynasties of Orissa. It will have struck many readers of that work that often as the towns and regions of the Cuttack and Pooree districts are mentioned in the historical portion, Balasore is hardly ever spoken of. One would not of course expect to find it mentioned under the name of Balasore, because Balasore as a town is a creation of the English and quite a modern place, but no other towns, villages, or parganas in this part of the province are ever mentioned. Till the arrival of the Musalmans, no event in Oriya history took place there, nor is there any evidence of its having been more than scantily peopled, if at all.

It will not therefore take long to put together the scattered notices that exist during the Hindu and Muhammadan periods. From the people themselves not much can be got, the best informed of them cannot, with few exceptions, go back further than the sanads granted to their ancestors by the provincial governors under Aurangzeb or at furthest Shah Jehan, and the majority do not as a rule know who their own great-grandfathers were, and do not care.

The first of the few notices of any part of this district occurs† in a speech made by Raja Anang Bhim Deo who ruled in Orissa A. D. 1175—1202, in which he informs his courtiers that the kings who had preceded him had ruled from the Kansbans in the north to the Rasikoilah in the south, but that he had extended his sway to the Datai Borhi river on the north. I cannot find what river is meant, but I presume it to be the Subanrekha, which in some parts of its course is still called Dantai. The statement that the whole country from the Ganges to the Godavery was

* [The little village of Balasore which afterwards, under English influence, grew into the present town, is called from a temple to Mahadeva Vaneshwara or "Shiva the forest lord," probably because the place where his temple stood was covered by dense jungles.]

† Stirling's Orissa. p. 109.

under this king's rule is clearly fabulous, and arises from the fact that the Godavery is called by Oriyas the "Sán Ganga" or little Ganges, so that it became a natural phrase in native adulatory language to say a king reigned from the great to the little Ganges. The area of this tract is said to have been measured at 124 million bighas, which is unintelligible, even with the small bighas of those days.

In 1450 we are briefly told that the Mughals came into the country, but it is not said from what quarter, and a prior invasion in 1243 is evidently a mistake.* The expedition was really to Jajnagar in Bengal, a place whose name has been confounded with Jajpore in Orissa. In 1457 we find the Muhammadans attacking Orissa from the south in conjunction with the Telingas, and the invasion of 1450 was probably from the same quarter. The Bhunyans of Garpadda, 15 miles north of Balasore, have in their possession a copper-plate grant of the estate which they still hold, made to their ancestor Potesar Bhatt by the Raja Pursottam Deb in 1503. The amount of land granted, 1,408 batis (= 28,160 acres), is so large that it is evident land was not of much value in northern Orissa in those days.

The road to Orissa must, however, have been practicable in 1516, for in that year, as we know from his life in Bengali, the great reformer Chaitanya travelled from Nadiya to Puri and took up his abode there for the rest of his days. Probably the district began to be cleared and settled about this time under the "Purshethi" system. Still we have no detailed accounts of it. About this time the Afghans from Bengal, however, marched right down to Cuttack itself, and the road which they made or used on this and their subsequent expeditions is still to be traced, and is known to the villagers as the "Pathán sarak." It runs parallel to the present Cuttack Trunk Road but nearer to the hills, and apparently from superstitious motives is left uncultivated to this day.

In 1550 Mukund Deo the last indigenous king of Orissa ascended the throne, and we are told of him that his sway extended to Tribeni Ghat on the Hugli. He it was in all probability who erected the strong chain of forts still standing at Raibanian in the extreme northern corner of the district, just opposite the place where the old Pathán road crosses the Subanrekha. In 1568 this fort was taken by the terrible Kálá Pahár, general of the Afghan forces who overran all Orissa, defeated and deposed Mukund and obtained possession of the whole province.†

* See Blochmann in J. A. S. B. Vol. XIII, p. 237.

† There is some controversy about this date. Dr. Hunter (Orissa, Vol. II, p. 10,) gives a note founded on materials supplied by my friend, the late Mr. Blochmann, from which he derives the conclusion that the date 1568 given by the Muhammadan historian is correct. This view has received signal confirmation from a discovery of my

Balasore now begins to be more important. The road to Bengal was open and the Muhammadan forces passed and repassed and fought many battles along it.

Before entering into the somewhat interesting details of the Musalman invasion, settlement and government of Orissa, it will be advisable to state briefly the general position of India.

Akbar ascended the throne in A. D. 1556, and though very young, soon commenced to consolidate his power. But in all parts of India there were Hindu Rájás who had either themselves wielded independent power, or whose immediate ancestors had done so. There were also numerous bands of Mughals and Afghans who, during the unsettled reigns of Akbar's predecessors, had penetrated into various distant parts of India in search of plunder, or with a view to carving out principalities for themselves by the sword. All these classes were only with extreme difficulty and after repeated chastisements reduced to obedience, and the history of Akbar's reign is chiefly occupied, as are those of his son and grandson, with the accounts of expeditions directed against refractory vassals.

Of the latter kind were the Afghan adventurers who so long held Orissa. In 1567 Sulayman Shah Kirani was viceroy of Bengal; he was in fact king in all but name. He it was who sent Kálá Pahár into Orissa; the accounts of the histories differ widely as to the date as well as the progress of this invasion. From local legends it would appear that Mukund Deo, after vainly endeavouring to hold the fort of Raibanian, retreated southwards fighting as he went, and was killed at Jájpúr. As Kálá Pahár was an ultra-fanatical Musalman, in the estimation of himself

own. At Srijanga, a village ten miles south of Balasore, I found on the edge of a large tank called the "Achyuta Ságar" an upright stone covered with an inscription. This stone I removed and set up in the compound of my house at Balasore, where it now is. The inscription, as partly decyphered by myself and several Pandits, yields the following results: The tank was dug by a Khandait who describes himself as "Achyut Baliar Singh son of Daitari Biswal, sole ruler in this region"; and he says he erected it when Man Singh, general of Akbar Padshah was in Orissa, in the 4699th year of the Kali Yug, in the 1520th year of the Saka era, in the 30th year of the "Yavan bhog" or Musalman invasion, and in the 37th *anka* or year of the reign of Ram Chandra Dev, first Sudra king of Orissa. Now both the Yug and the Saka years agree in corresponding with A. D. 1598. Consequently if 1598 be the 30th year of Musalman invasion, the first year of that period must be 1568 as Abul Fazl reckons, and not 1558 as Stirling, following the Oriya annalists, puts it. The 37th *anka* would be the 28th year of Ram Chandra's reign, because in reckoning the *anka*, the first two years and every year that has a 6 or a 0 in it are omitted, we must thus omit the years 1, 2, 6, 10, 16, 20, 26 and 30. This takes us back to 1570 as the year of Ram Chandra's accession, which leaves 1569 to represent the period of anarchy when there was no king, according to the native annalists. This discovery of the Srijanga stone is thus valuable as elucidating a disputed date in history.

and his followers any one of them who was slain in battle with the Hindús was entitled to be considered a martyr. Accordingly we find there must have been a battle at Garhpada, for there lies buried one of Kálá Pahár's officers with the title of Shahid or "martyr." His name was Hitam Khán, and a grant of rentfree land of 138 bighas is enjoyed by the Garhpada Bhuyans on condition of keeping up his shrine. At Bastah lies another, Sháh Husayni Shahid, at Ramchandarpur south of Garhpadda is a third Muhammad Khán Shahid, and at Remnah a fourth Gulab Sháh Shahid, from whom also the large bazar of Shahji Patna takes its name. We can thus trace Kálá Pahár all through the district by the tombs of his slain Captains. He left a number of his turbulent followers in Orissa and returned to Bengal where he was killed in battle. A great number of these lawless adventurers settled at Kasba, a suburb of Balasore, and at Bhadrakh and Dhámnagar, where their descendants are still to be found.

In 1574 Daúd Khán, the king of Bengal, being driven out of that province by the forces of the Emperor Akbar under Munim Khán, fled to Orissa and remained hovering backwards and forwards between Cuttack and Jellasore for some time. At last Munim Khán with a large force, accompanied by the celebrated Raja Todar Mal marched down through Midnapore on him. The armies met on the north bank of the Subanrekha near the village of Tukaroi and the battle took place on the 3rd March 1575.* Munim Khán was victorious and Dáud fled to Bhadrakh. The place where the battle was fought is well known to the villagers and is still called Mughalmárí (the Mughal's slaughter). It runs westward for some six miles from the present Jellasore dak bungalow towards the river. Todar Mal pursued Dáud to Bhadrakh, but Dáud did not wait to be caught. He fled to Cuttack and got into the fort there and garrisoned it strongly. The Imperial forces, however, attacked and took it, and Dáud then submitted to the Emperor. Munim Khán returned to Bengal, where he and many of his officers died of fever said to have been contracted in Orissa, but more probably due to their own imprudence in taking up their residence in the pestilential jungles of Gaur.

After the submission of Dáud he was left in possession of central Orissa as far north as the Baitaraní, but the territory now comprised in the Balasore district was annexed to the Subah of Bengal,† and two Thana-

* See Blòchmann, Aín, Vol. I, p. 375.

† In the Aín Akbari it is indeed asserted that the whole of Orissa was on this occasion subjugated and added to the Subah of Bengal. It is described as divided into Sirkars like other Subahs. Sirkar Jalesar (Jellasore) includes the greater part of the present district of Midnapore. The other Sirkárs are Bhadrak, Kaṭak (Cuttack), Kalinga Daṇḍpáṭ, and Raj Mahindrah (Rajamundry), but no details are given of the two last, and it is well known that they were not subject to the Empire. (Aín Akbari by Blochmann, Persian text, Vol. II, p. 209).

dars were appointed, one at Jellasore, the other at Bhadrakh. Balasore itself was not a place of importance in those days. After the death of Munim Khán the reins of authority became relaxed, and Dáud came up into Balasore and marched into Bengal. The Afgháns of Orissa were for many years in a characteristically Afghán state of riot and quarrelling, and Balasore, lying as it does between Cuttack and the Bengal frontier, was often the battle-field between the rulers of the two provinces. None of the battles were, however, very decisive, nor are there any traces of the battle-fields still remaining, though many villages and market places with Musalman names in various parts of the district testify to the settlement of Afghán and Mughal invaders.

In 1582 Kutlú Khán, the Afghán leader, who since Daud's death had been the virtual ruler of Orissa, marched through Balasore against the Subahdár of Bengal, and advanced as far as Burdwan, where in 1583 he was defeated by Sadik Khán. At that time the sway of the Afgháns of Orissa extended with a few exceptions as far as the Rúpnaráyan river, but after this victory they were beaten back, and retreated to Cuttack, leaving Balasore as far as the Baitarani river for a time unmolested.

Kutlú Khán died in 1590, and his sons being minors sued for peace and agreed to surrender the temple of Jaganáth and the sacred domain or "khetra" to the Emperor. The Governor of Bengal at this time was Rája Man Singh, who as a Hindú was highly pleased at rescuing the holy city from the hands of the infidels who had long exercised a cruel and tyrannous sway over the priests.

Two years later, however, the treacherous Afgháns again seized Jaganáth and this roused Mán Singh's wrath, and in a great battle fought in 1592 on the northern bank of the Subanrekha, probably on the same site as Munim Khán's victory at Tukaroi or Mughalmari, he utterly crushed the Afgháns and took possession once more of Orissa. The rebels were turned out of Jellasore and fled to Cuttack where they shut themselves up in the strong fort of Sarang Garh, three miles south of the city. Mán Singh soon after besieged and took Sarang Garh, and received the submission of the Afgháns.

Sulṭán Khusrau, grandson of Akbar and son of Jahangir was named Viceroy of Orissa, but he never visited the province, his appointment being probably merely honorary.

Mán Singh having gone to Agra to pay his respects to the Emperor, the Afgháns under 'Usman Khán again rose in 1598 and collected a large force at Bhadrakh, where they defeated the Imperial troops under Maha Singh, occupied a great portion of western Bengal, and again obtained possession of Balasore as far as the Subanrekha. Mán Singh, however, again returned and defeated 'Usman at Sherpur 'Atai north of Burdwan.

'Usman as usual retired to Cuttack, where he was not pursued. In all these constant advances and retreats, the Afgháns seem always to have regarded Bhadrakh as their frontier. Jellasore was the frontier of the Imperialists, and the intermediate country was a debateable ground over which both parties fought at their pleasure. I mention this fact as confirming what I have said on a previous page, that central and northern Balasore even down to so late a period as this, contained no towns of importance but was scantily peopled and not worth fighting for.

For eleven years 'Usman Khán ruled at Cuttack, but does not seem to have exercised much sway over Balasore, as he never during that time came into collision with the Imperial garrison at Jellasore, which he could not have failed to have done had he ventured so far north. In 1611, however, he appears to have begun aggressions once more, and encamped on the banks of the Subanrekha again with an army of 20,000 horse and defied the Emperor's forces. After a fierce encounter which from the accounts given by the native historians appears to have taken place among the marshes near Rájghat on the southern side of the river, 'Usman was shot in the head and died. His troops fled in disorder and Shujáat Khán, the leader of the Mughals, entered the province as a conqueror and annexed it finally to the Empire.

Orissa now enjoyed peace for five years under the able government of Ibrahím Khán, and it is from this epoch that we date the rise of Balasore as a commercial town. The district produces rice in abundance, and when the Afgháns ceased to desolate it, it rapidly recovered and began to export. The weavers of Balasore whose cloths were long so celebrated now begin to be heard of, and it was not many years later than this date that the English established themselves as traders in the district.

In 1621 Prince Khurram son of the Emperor Jehangir (subsequently Emperor under the title of Sháh Jahán) invaded Orissa through the hills, turned out Ahmad Beg, the governor of the province, and after appointing Kuli Khán in his place pushed on through Balasore into Bengal. He does not seem to have stayed long in Orissa, though his rebellion lasted a long time in Bengal and Behar. Orissa does not appear to have suffered in any way from the change of governors, nor is there anything further to be gleaned from the Persian historians save a string of successive governors. We learn incidentally that the cultivation of the soil was increasing and was further promoted by the grant of many military jagirs to old soldiers of the Empire. One of these jagirs was established at Dhamnagar where the descendants of the original grantees still live, and a populous Musalman colony has sprung up. It was during this period as will be seen hereafter that the English obtained from the Emperor Sháh Jahán a firman empowering them to open factories at Pipli and Balasore.

In the time of Mir Taki Khán, who was Naib of Shujauddin, Nawab of Bengal, all that part of the Sirkar of Jellasore lying north of the Subanrekha was transferred to Bengal, thus making that river the northern boundary of Orissa. It is much to be wished that this well defined boundary had been adhered to ever since. Taki Khán ruled Orissa from 1725 to 1734. He was a bigotted Musalman, and in his time the Rája of Khurda found or affected to find it necessary to carry off the idol of Jaganáth to the hills beyond the Chilka. All pilgrimage was in consequence put a stop to, and the revenues of the province greatly injured. Taki Khán lies buried in the Kadam Rasúl at Cuttack, but the local traditions of Balasore represent him as having spent much of his time in that town. He built the masonry tank, and reservoir and the mosque and gardens known as the Kadam Rasul in Balasore.* He is also said to have had a hunting palace at Remna five miles from Balasore under the Nilgiri Hills, a place still abounding with game, and whose name (Sanskrit Ramaṇa=a place of sport, or hunting-ground) supports the legend. There are still at Remna extensive ruins of Muhammadan tombs and buildings. Taki Khán is well remembered in Balasore, and his character for piety stands high. A curious legend is current that the Vaishnava, Nandhá Gosain, whose temple is in Malikáspur a suburb of the town, was in the habit of making a great noise with drums and cymbals while celebrating his kirtans or religious ceremonies. The Nawab's devotions being disturbed by this noise, he ordered it to be stopped. That evening when the naubat, or beating of drums at sunset was about to take place, none of the drums would sound, and this state of things continued till the Nawab withdrew his prohibition from Nandha Gosain, when the drums again sounded as usual.

In 1734 Murshid Kuli Khán was appointed governor of Orissa, and with him came as his Dewan the infamous Mir Habib who afterwards betrayed the province to the Marathas. The first thing Murshid did was to induce the Bráhmans to bring back to Puri the idol of Jagannáth which had been carried off for safety to the hills across the Chilka. By this step the revenues of the province were at once immensely increased, as the stream of pilgrims, which had for some time ceased owing to the disappearance of the object of their worship, now set in again, and the tax on them is said to have risen from a nominal sum to nine lakhs per annum. In 1740 Ali Verdi Khán became Governor of Bengal and made himself virtually independant of the Emperor, whose power had been much shaken

* Probably so named in imitation of that in Cuttack, which derives its name "footstep of the Prophet" from being supposed to contain some relics of Muhammad brought from Mecca.

by the invasion of Nadir Sháh and the sack of Delhi. The Governor of Orissa refused to obey Ali Verdi, and the latter marched against him. The two armies met at Balasore and the native account is so precise that I am able to identify the exact spot where the battle took place. It is about a mile north of the Civil Station where a long ridge of high land, then clothed with woods, slopes down into the marshes between the Nuniajori and the Burhabalang rivers near the villages of Haripur and Dohopara.* The river surrounds this land on three sides, and in so strong a position Murshid might long have defied his adversary, who being cut off from the town could get no provisions and was in much distress. Murshid's son-in-law, however, rashly moved out to attack the Nawab, and the result was a complete victory for the latter. Murshid and his party got on board a ship at Balasore and fled by sea to Masulipatam. The Raja of Rattanpur with much promptness carried off Murshid's women and children from Cuttack and delivered them to him in the south before Ali Verdi could come up.

Sayid Ahmad, the Nawab's nephew, was made Governor, and rendered himself very unpopular by his tyranny. At last the people of Cuttack rose against him and recalled Murshid Kuli. He would not come himself, but sent his son-in-law Bakir Khan, who was, however, conquered again on the banks of the Mahanadi in 1741 by Ali Verdi, who appointed Masum Khán Governor of Orissa. He thinking all danger now at an end, disbanded his troops who mostly returned to their own homes, and contented himself with an escort of five thousand horse and some infantry recruited in the province. In this defenceless state was Orissa, when a great calamity occurred which entirely changed the whole current of its history, and introduced the darkest and bitterest period of suffering that the harrassed and wasted province has ever known.

†In the month of February 1743 (Phalgun 1150) the Marathas‡ from Berar entered the province of Orissa. After the defeat of Murshid Kuli Khán by Ali Verdi Khán at Balasore in 1740, the traitor Mir Habibullah, dewan of the former, had secretly invited the Marathas to attack

* To the traveller approaching Balasore from the north through the centre of Murshid's position along the Calcutta Trunk Road the suitability of this particular spot for a camp of defence is very strikingly apparent. Balasore town and station lie along this high ridge with the swampy Nuniajori winding at its foot and the river just beyond.

† The historical details here given are derived principally from Grant Duff's History of the Mahrattas; the minor and local details from native tradition and the records of the Balasore office.

‡ I write this word as the natives themselves do मराठा Maráthá, the common spelling Mahratta is incorrect.

In the time of Mir Taki Khán, who was Naib of Shujauddin, Nawab of Bengal, all that part of the Sirkar of Jellasore lying north of the Subanrekha was transferred to Bengal, thus making that river the northern boundary of Orissa. It is much to be wished that this well defined boundary had been adhered to ever since. Taki Khán ruled Orissa from 1725 to 1734. He was a bigotted Musalman, and in his time the Rája of Khurda found or affected to find it necessary to carry off the idol of Jagannáth to the hills beyond the Chilka. All pilgrimage was in consequence put a stop to, and the revenues of the province greatly injured. Taki Khán lies buried in the Kadam Rasúl at Cuttack, but the local traditions of Balasore represent him as having spent much of his time in that town. He built the masonry tank, and reservoir and the mosque and gardens known as the Kadam Rasul in Balasore.* He is also said to have had a hunting palace at Remna five miles from Balasore under the Nilgiri Hills, a place still abounding with game, and whose name (Sanskrit Ramana=a place of sport, or hunting-ground) supports the legend. There are still at Remna extensive ruins of Muhammadan tombs and buildings. Taki Khán is well remembered in Balasore, and his character for piety stands high. A curious legend is current that the Vaishnava, Nandhá Gosain, whose temple is in Malikáspur a suburb of the town, was in the habit of making a great noise with drums and cymbals while celebrating his kirtans or religious ceremonies. The Nawab's devotions being disturbed by this noise, he ordered it to be stopped. That evening when the naubat, or beating of drums at sunset was about to take place, none of the drums would sound, and this state of things continued till the Nawab withdrew his prohibition from Nandha Gosain, when the drums again sounded as usual.

In 1734 Murshid Kuli Khán was appointed governor of Orissa, and with him came as his Dewan the infamous Mir Habib who afterwards betrayed the province to the Marathas. The first thing Murshid did was to induce the Bráhmans to bring back to Puri the idol of Jagannáth which had been carried off for safety to the hills across the Chilka. By this step the revenues of the province were at once immensely increased, as the stream of pilgrims, which had for some time ceased owing to the disappearance of the object of their worship, now set in again, and the tax on them is said to have risen from a nominal sum to nine lakhs per annum. In 1740 Ali Verdi Khán became Governor of Bengal and made himself virtually independant of the Emperor, whose power had been much shaken

* Probably so named in imitation of that in Cuttack, which derives its name "footstep of the Prophet" from being supposed to contain some relics of Muhammad brought from Mecca.

by the invasion of Nadir Sháh and the sack of Delhi. The Governor of Orissa refused to obey Ali Verdi, and the latter marched against him. The two armies met at Balasore and the native account is so precise that I am able to identify the exact spot where the battle took place. It is about a mile north of the Civil Station where a long ridge of high land, then clothed with woods, slopes down into the marshes between the Nuniajori and the Burhabalang rivers near the villages of Haripur and Dohopara.* The river surrounds this land on three sides, and in so strong a position Murshid might long have defied his adversary, who being cut off from the town could get no provisions and was in much distress. Murshid's son-in-law, however, rashly moved out to attack the Nawab, and the result was a complete victory for the latter. Murshid and his party got on board a ship at Balasore and fled by sea to Masulipatam. The Raja of Rattanpur with much promptness carried off Murshid's women and children from Cuttack and delivered them to him in the south before Ali Verdi could come up.

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Orissa. At this time Raghoji Bhonsla was ruler of Berar holding his court at Nagpur. Habib's negociations were made in the first instance with Bhaskar Pandit or Pant (as the Marathas corrupt the word) Dewan of Raghoji. With his master's permission Bhaskar Pant made an attack upon Behar in the first instance with twelve thousand horse and got as far as Pachet, before Ali Verdi could get up from Orissa to oppose him. A battle was fought at Katwa in which the Marathas were victorious, and Mir Habib having been (probably on purpose) taken prisoner, at once installed himself as Bhaskar's adviser, and enabled him to take possession of the town of Hugli, and subsequently to overrun the country as far as Midnapore. Ali Verdi, however, was not discouraged, he again attacked the Marathas and drove them through Midnapore, skirmishing as they retreated as far as Balasore. Here they made a stand, and a battle took place on the high land now occupied by the Civil station of Balasore, a little to the south of the camp of Murshid Kuli mentioned in a preceding paragraph. The result of the battle was unfavourable to the Marathas, for they retreated on Cuttack, taking the opportunity, however, of plundering everything they could lay hands on as they went. From Cuttack they retreated through the hills to Berar.

Immediately on their return to Nagpore, Raghoji Bhonsla himself resolved to make an attack on Bengal and marched at once. He arrived at a place between Katwa and Bardwan, but the Maratha Peshwa Balaji Rao having been incited by the Emperor of Delhi to restrain his turbulent feudatory, had marched through Allahabad, Patna and Bhagalpur, effected a junction with Ali Verdi Khán at Murshidabad and bore down on Raghoji. The latter having no mind to come to open blows with the Minister of his nominal sovereign, retreated but was overtaken and defeated, after which with the remnant of his forces he marched again through Balasore, plundering and destroying as he went, back to Berar.

Into the confused history of Maratha politics in those days it is not necessary to enter. Suffice it to say that Raghoji Bhonsla was, next to the Peshwa, the most powerful Maratha noble of the time, and shortly after his return to his capital he marched on Sattara, and extorted from the puppet Rája a deed by which, while the rest of the countries under Maratha rule, or rather misrule, were retained by the Peshwa, to Raghoji himself were assigned the revenues of Oudh, Behar, Bengal and Orissa. The Rája was possibly giving away a good deal more than he possessed, but that did not much matter, Raghoji's horsemen, with their long spears, might be trusted to settle the rest.

In the cold weather of 1744 Raghoji sent an army of 20,000 horse into Orissa apparently by way of Sambhalpur. Ali Verdi met them in

Midnapore and being unable to cope with them in the field proposed negociations. He invited to an entertainment Bhaskar Pant, Ali Karawal and the principal officers, and there murdered them. The army retreated in confusion through Balasore and were much harassed by the peasantry who maintained a guerrilla warfare and cut off all stragglers without mercy.*

In 1745 Raghoji took his revenge. Marching down upon Cuttack in November, he overran the country probably as far as the Subanrekha, and refused to leave unless he was paid three krores of rupees. He then advanced to Katwa, but the indomitable Ali Verdi met him there and defeated him, on which he returned to Berar without his money, but plundering as usual on the way.

Raghoji was now, fortunately for Balasore and Orissa, engaged in wars and intrigues on his own side of the country for some time. In the immediately succeeding years he appears to have left Orissa pretty much to itself, though stray bands of Marathas made their appearance from time to time in 1748 and 1749; but in 1750 Janoji Bhonsla, son of old Raghoji, was sent into Orissa with Mir Habib and the two commenced their old system of plunder and extortion. In 1750 Ali Verdi lost all hope of resisting the marauders and gave up to them the whole province south of the Subanrekha as well as the Pargana of Pattáspur north of that river. The Marathas were to hold the province as security for the *chauth* or tribute always claimed by them from conquered provinces.

Stirling speaks of a second invasion which occurred in 1753, but this seems doubtful. At any rate it could not have been led by Janoji, for Raghoji died in that year, and Janoji was busy in securing his succession to the hereditary office of Sena Sahib or Commander-in-Chief and was at Puna for that purpose during the greater part of the year.

In the year 1751, during Janoji's occupation of Orissa, the traitor Habib met his deserts. Janoji charged him with embezzlement and made him prisoner in his camp at Garhpada, a large and important village on the borders of Moharbhanj, 15 miles north of Balasore, and still the seat of a respectable family of zemindars. Habib was indignant at being confined, and with a few followers tried to escape, and the guards placed over him hacked him to pieces. The place, where his camp was pitched, is still known as Habibganj. It is a small bazar and village in Pargana Garhpada.

There is nothing further at this period specially relating to Balasore. In 1755 the whole province was finally and conclusively made

* One is glad to see the Oriya peasantry showing some little spirit on this occasion. It would have been better for them had they done so oftener.

over to the Marathas at the request of the zemindars of Midnapore and Burdwan in exchange for 4 lakhs of the "chauth", the remainder to be paid from Bengal. Janoji's attention was engrossed by more exciting events in his own country, and he contented himself with getting as much money as he could out of the province and leaving it to be governed by his officers as they chose. The northern limit of Orissa was at this time not as is generally stated at the Subanrekha, but included Pataspur and Bhograi.

The oppression of the Marathas has often been written about. To this day the peasant's name for anarchy and oppression is "Maratha Amal." Janoji Bhonsla died in 1773, and was succeeded by his brother Sabaji, who ruled till 1775, when he was slain in battle by Madhoji his brother, who succeeded him as regent for his own son Raghoji II who had been adopted by Janoji and named his successor.

Before continuing the history of Balasore under the Marathas it will be interesting to collect the scattered notices of their presence in Orissa as it affected the then growing power of the English. Our countrymen as will be stated more in detail in the next section, had for more than a century been in possession of factories and trading-posts in Orissa.* The chief of these were at Balasore and Pipli on the Subanrekha of which more hereafter. The first entry in the Government records is dated 25th February 1748, and records the alarm caused by the Marathas, then encamped at Katwa in Burdwan and threatening Murshidabad. On the same date Mr. Kelsall, Resident at Balasore, suggests the sending of the post by mounted postmen as faster than runners. The Marathas were in great force in the Santhal Pergunnahs and all over lower Bengal, and took a fort on the site of the present Botanical Gardens. The Nawab sends a hint to the English to the effect that they should drive away these marauders who had plundered the Company's fleet of boats laden with silk from Casimbazar.

In August of the same year, Mr. Kelsall again writes from Balasore that the "Morattoes Horse" had attacked the factory of Balramgarhi at the mouth of the Balasore river, but had been repulsed by the Nawab who had pursued them into Cuttack.

In May 1749 the Nawab was at Cuttack, the Marathas had fled, but were expected to return the next year, which, as we have seen, they did under Janoji. There were still, however, parties of them hanging about Diamond Harbour and the lower reaches of the river. They seem to have given the English a wide berth, though the timid Bengalis could make no

* Selections from the records of the Government of India, by Rev. J. Long 1748 to 1767.

stand against them. The Marathas were not blood-thirsty, their object was plunder, but of that they were insatiable. Too contemptuous of the Oriyas to take any great precautions, they seem to have wandered about in small bands stripping the country bare as they went.

In 1750 with Janoji's return matters grew worse and we find Mr. Kelsall reporting that, owing to the disturbances in the country, he could not "purchase any ready money goods, as the weavers or greater part of them have been obliged to abscond."

Stirling would appear to be correct as to an invasion in 1753, (though I do not think Janoji himself could have been with it), for the Resident at Balasore writes from Balramgarhi on 1st February of that year in a very desponding tone—"Weavers at Balasore complain of the great scarcity of rice and provisions of all kinds occasioned by the devastation of the Mahrattas, who, 600 in number, after plundering Balasore had gone to the Nellegreen (Nilgiri?) hills; several weavers have brought their looms into the factory, and the few who remain declare they shall be obliged to quit the place. Desires he will send him 1500 or 2000 maunds of rice on the Honorable Company's account."

The residency at Cuttack does not seem to have been established till 1757, nearly a hundred years later than Balasore; for there is a letter dated 24th July of that year from Mr. John Bristow urging that he be allowed to hoist the Company's flag there. Again in 1759 Mr. Gray is directed to stay at Cuttack as long as he can with safety to himself, to keep the Government informed of the proceedings of the "Morattoes."

Even so late as 1760 the English do not seem to have contemplated that the Marathas would permanently retain Orissa, though one would have thought that they must have heard of the treaty in 1755, in spite of which "Mr. John Burdett at Balasore requests to be allowed to keep the spies allowed for that Factory, while the Marathas remain in the country, otherwise it will be impossible for him to acquaint us with their motions." (March 27.)

It appears in fact that the Marathas were bad neighbours, and not careful to confine themselves within their treaty boundaries. Long after 1755 the Burdwan Rája collected and kept up troops from fear of them and "Gawsib Singh the Jellasore zamadar, a man of great valour" was sent into Midnapore to protect the ryots. Pattaspore being in the hands of the Marathas, Jellasore must have been a very exposed position, a long narrow strip in fact of the Nawab's territory stretching far down into the country held by the Marathas, and consequently exposed to inroads from them. The collection of troops by the Bardwan Rája was probably simply a feint and was seen through, and he was ordered to disband them. Sheo Bhat Sántra was the first Maratha Subadar of Orissa,

and he it is who is alluded to in the Proceedings of 25th February 1760 as "Shubuts having entered this Province with a party of Marathas and commenced hostilities against us." The people of Balasore have no distinctly historical facts to relate of this period; all they know is, that bands of "Bargis," as the Maratha horse were called, were always wandering about the country, fighting and plundering under pretext of collecting revenue. The zamindars and khandaits were turbulent and refractory, and it is astonishing how little influence the Marathas seem to have had over them.

In 1761 we hear of the troops of "Shah Bhut" coalescing with the Rájas of Birbhum and Bardwan, and subsequently returning to Balasore by way of Midnapore. It appears from Proceedings of September 17, 1761 that Sheo Bhat considered himself entitled to take possession of Midnapore, and to ravage Bengal whenever he did not get his chauth, and the English therefore resolve on that date to "set on foot an expedition against Cuttack," the Nawab to pay the cost by an assignment on the revenues of Jellasore and Cuttack. The omission of all mention of Balasore shews that it had still no importance in the Revenue Department. The old division into the Sirkars of Jellasore, Bhadrakh, and Cuttack was evidently still in force. Sheo Bhat had at this time forcibly annexed the chauth of Midnapore to that of Cuttack and was deaf to the Nawab's remonstrances. Mr. Johnstone the Company's Resident at Midnapore was beseiged in "Midnapore house" 14 days by Sheo Bhat at the head of a large force, and made a gallant defence. This roused the Calcutta Committee and they suggested to the Nawab that the war should be carried into the enemies' country by an expedition to Cuttack, which would have the effect of securing to him "the total ancient possessions of the Soobahs of Bengal" and be "a considerable addition to his revenues and a firm barrier against future incursions of the Marathas." They wrote at the same time to the Bombay Committee urging them to make a simultaneous attack on the Marathas from their side.

Nothing, however, came of this, owing to the Nawab's unwillingness to act. In 1763 there is a letter from the Governor at Balasore to one "Moonshee Gholam Mustapha" directing him to warn Sheo Bhat that in case of his continuing to oppress the ryots "the army that is just arrived from Madras" would be sent against him, and the town of Cuttack taken from him. In 1764 Sheo Bhat was turned out, and Bhawani Pandit appointed in his place. On the 5th October the latter writes a threatening letter stating that the former Nawab's negociations concerning the chauth were never brought to an issue without the approach of an army. Unfortunately the extracts in Mr. Long's book are arranged chronologically, so that we never get the full thread of any one series

of transactions. I cannot say therefore what was the result of this letter, but as the English on their part had their hands full at this time with their quarrel with the Nawab, their inaction is perhaps sufficiently accounted for.

There is, however, great dearth of information about the internal affairs of Balasore at this time. On 4th December comes another letter from Bhawani Pandit stating that two years before the zamindars of Moharbhanj and Nilgiri had plundered the inhabitants of some parts of Balasore and entered into a confederacy with Bháskar Pandit, faujdar of that place, whom they had carried off into Nilgiri and kept there, so that no revenue had been received from him for two years. This is hardly to be reconciled with the fact that two years earlier Sheo Bhat and his cavalry had been ravaging Midnapore and Jellasore. The gleanings remaining after Sheo Bhat, for the Nilgiri zamindar to pick up, must have been scant enough. One wonders after so many years of plundering what there could have been left for any one to take. Bhawani writes again on the 27th to say, he had come to the neighbourhood of Jellasore with his troops, but as the Maharája (Janoji) had always been desirous to do "what is most beneficial for the poor inhabitants of the country" (! !) he had ordered his officers not to enter either Jellasore or Midnapore, so as to avoid any breach with the English. All this while Sheo Bhat was still in Orissa exciting the zamindars and paiks to resist the new Governor Bhawani Pandit. The Rája of Kanika whose territories lay partly in Balasore and partly in Cuttack was notorious for the disturbances he kept up. He and his paiks were conspicuous then, and as we shall see for forty years after, for their oppression and general unruliness.

The Court of Directors in 1764 express their great pleasure at learning that the proposed expedition against the Marathas in Balasore and Cuttack had been given up as "conquests are not our aim." They little foresaw what an amount of conquests would soon be forced on them by circumstances!

The Marathas were now, however, on good terms with the English, and in February 1764 there was a good deal of correspondence. Three residents were appointed, Mr. Marriott at Balasore, Mr. Hope at Cuttack, and Mr. Moore at Malood; their chief business was to keep open the communication between Calcutta and Madras, and on one occasion mention is made of sending letters by this route to Bombay, a project frequently revived in subsequent times. A letter was also written to "Bauskir Pandit, Fauzdar of Ballasore" (probably the Bháskar Pandit mentioned above) requesting him to assist Mr. Marriott who was to live at the Company's Factory; and another curious letter to "Chumina Sen, Chief at Cuttack" requests him to give strict orders to the zamindars to

provide "oil and mushauls, tom-toms and pike-men &c. according to custom." The tom-toms were to be beaten to frighten away tigers which infested the jungles through which the road passed, a significant hint as to the desolate state of the country in those days.

At the end of this year, however, we again hear from Midnapore and Balasore of threatening bodies of Maratha horse on the Balasore frontier, to check whom it was thought advisable to despatch a small force under Major Champion to garrison Midnapore. Janoji appears about this time to have sent a force of 5,000 cavalry to take possession of Midnapore.

We now come to the acquisition by the Company of the Dewany. The Directors in 1767 agree to pay to the Marathas all arrears of chauth on condition of the cession of Orissa, and negociations were in consequence opened with Janoji to this end. A vakil, one Udaipuri Gosain, was appointed by Janoji to treat with the Bengal Council, and the amount was fixed at 13 lakhs of rupees. The vakil, however, pretended that he had no authority to deliver up the province to the English, and there the matter seems to have rested for the time being.

From this point there is little more to record of general history. The internal history of Balasore for the next thirty-four years is also nearly a blank. The Maratha Governors were as follows as far as can be ascertained:

Sheo Bhat Santra	A. D.	1756
Chimna Sahu and Udaipuri Gosain	,,	1764
Bhawani Pandit	,,	1764
(Sheo Bhat in rebellion in Kanika and Kujang all this time).		
Shambhuji Ganesh	,,	1768
Babaji Naik	,,	1771
Madhaji Hari	,,	1773
Babaji Naik (restored)	,,	1775
Madhaji Hari (restored) same year	,,	1775
Rajaram Pandit	,,	1778
Sadashib Rao	,,	1782
Chimnaji Bala...	uncertain.	

Of the local Faujdars in the Balasore district tradition has preserved some scattered reminiscences. Bhaskar Pandit was Faujdar about 1760, and is mentioned as we have seen in the English records. The story of his having been carried off into Nilgiri by the Rája has been noticed above. From him is probably named the village of Bhâskarganj opposite to the Mission premises at Balasore.

Lala Kishor Rai is also mentioned as Faujdar, but his date is not certain. He is said to have founded the Lala Bazar near Bárabáti in the town; and to have built a Báradari or twelve-doored palace near that place.

After him came Raghunath Sárang whose name is connected with the village of Raghunathpur, eighteen miles east of Cuttack; he was succeeded by Motiram whose administration lasted for a long time, some say, for fifteen years, but this is improbable as the Marathas were constantly changing their officials, and few, even of the higher grades, held office for more than four or five years. In his time an expedition was sent against Bairagi Bhanj, Rája of Moharbhanj who had withheld his peshkash. This expedition returned victorious and brought with it, besides the captive Rája, two idols of Hanuman and Lachminarayan which are still worshipped in temples in the town.

The last Maratha Faujdar of Balasore was Mayúra Pandit, commonly called Moro Pant who lived on the site where the Jagannáth temple in Balasore now stands. He appears to have been a rapacious tyrant, and there are several allusions to him in Captain Morgan's early letters. When defeated by the English, he retired to Cuttack plundering the ryots as he went, and in the following year we find the revenue authorities allowing remissions on account of rents forcibly collected in advance on his retreat by Moro Pant. Oddly enough he is stated in the correspondence to be still residing in Cuttack, and it is suggested that he be brought to account for his spoliations, but the wise policy of passing a sponge over all transactions of the former Government, which prevailed at that time probably saved him, as we do not read of his being questioned.

To close the account of the Maratha period, I here bring together various facts or traditions which I have collected from natives of the district. The town of Balasore in those days consisted principally of the bazars which had grown up round the English and Dutch settlements, and of the suburbs lying along the river, then as now, chiefly inhabited by Muhammadans, as Kasba, Muhamadpur, Nurpur &c. Motiganj, now the centre of the town, and the principal market-place was founded by Motiram, probably about 1785—1790. The rest is described as a plain covered with jungle and scrub. The road to Jagannáth ran through the town past the Gargaria tank to Phulwar Ghát and must have been from the nature of the country almost impassable for six months of the year.

Rents were paid chiefly in cowries, and all collections were remitted to Cuttack once in three months, including the peshkash from Morbhanj and Nilgiri. The peshkash of Amboh, Keonjhar, Sokinda, Chidra and other mehals near the Baitarani appears to have been paid through the Faujdar of Bhadrakh. Old men still remember to have heard

their fathers tell of the terrible punishments inflicted by the Maratha rulers. All cases were tried verbally, no record of any kind being kept, and culprits were sentenced to be tied to the heels of a horse which was then flogged through the streets. Others were bound, smeared with sugar and exposed to the ants and other insects. Others again had their fingers tied together and wedges of iron inserted between them.

The trade of the port was even then considerable. Madras ships came for rice and paddy, and the Laccadive and Maldive islanders then as now visited the port. It was from these latter that the cowries, so much used as currency, were obtained.

A seer of rice was sold for 15 gandas or about 70 seers to the rupee. (It was 65 seers in 1805, and now in favourable seasons sells at 30 or 32.) Opium cost a *pan* of cowries per masha, salt 14 karás per seer. The advantages of low prices were, however, much counterbalanced by the capricious exactions of the rulers. Although they seem to have had the sense not to drive away the trade by oppressing foreigners, yet upon the natives of the province itself they had no mercy. It was dangerous to be rich, or at least to display any amount of wealth, lest the attention of the Marathas should be called to the fact, and plunder and extortion follow as a matter of course. It is not surprising therefore that when the English appeared on the scene, the Marathas were left to fight their own battles, quite unsupported by the people. Indeed, they seem to have been so conscious of their unpopularity as never to have attempted to enlist the sympathies of the Oriyas on their behalf. Had they done so, the turbulent Rájas of the hills and the sea-coast might have given us a great deal of trouble and enabled the Marathas to hold out for some time.

The English Period. The English as traders.

To Balasore belongs the honour of containing the first settlement made by our countrymen in any part of the Bengal Presidency. By a firman, dated February 2nd, 1634 the Emperor Shah Jahan granted them permission to establish a factory at Pipli on the Subanrekha.* They were prohibited from settling on the Ganges or any of its branches, in consequence of the disturbances caused by the Portuguese in the Sundarbans and other places shortly before. In 1640 through the intervention of Mr. Boughton, a Surgeon who had obtained great influence over several members of the Royal Family by curing them of various diseases, the English obtained permission to establish factories at Balasore and Hughli. In consequence of this permission they applied to the Nawab who granted them 12 bátis (a báti is 20 bighas) of land near the village of Balasore which was then rising into some importance as a port. The settlement

* Stewart's History of Bengal, page 244.

was called Bárabáti (*i. e.* twelve bátis) from its extent, and is at present the principal quarter of the modern town of Balasore, and the residence of the wealthiest merchants.

It is not exactly known when the Dutch first came to Orissa, their settlement at Balasore, however, is less advantageously situated than that of the English. The latter commands the river and a convenient careening creek, and has also better means of access to the native town, while the Dutch Settlement, still called "Hollandais Sahi", is behind that of the English and cut off from the river and the town by Barabati. I conclude therefore that the English came here first, as if the Dutch had been first in the field, it is not likely that they would have taken the worse site of the two. We do not find any mention of them before 1664 when they had a dispute with the English about their mutual boundaries, which was settled by the Nawab Shaista Khán. The boundaries are, however, very vague and refer to certain trees, roads and ditches which are of course not now in existence. The present boundary is very irregular and overlaps the land of Barobati in several places.

From the Cuttack records it appears that they acquired a plot of land at Balasore from the Nawab Mataqid Khán; this officer was naib for Sháh Shuja son of the Emperor Shah Jahan and was appointed in A. H. 1055= A. D. 1645. (Padshahnamah, II, 473.) This would make them at least 5 years later than the English, even if we suppose them to have got the grant in the very beginning of Mataqid's tenure of office.*

The Danish Settlement, now called "Danemár Dinga" is worse situated than the Dutch, being further up the creek and further from the town, and it is stated by Stewart that they and the French did not arrive in Balasore till 1676. There is a Dutch tomb still standing in the compound of the old factory, on which is the following inscription:

"Michael Jans Burggraaf van Sevenhuisen obiit [ ] Novemb. 1696." The day of the month has unfortunately been broken off in the cyclone of July 1871 by a tree falling against it. Stirling is in error in saying (Orissa, page 30) that this tomb is dated 1660. It is a huge triangular obelisk of brick plastered, about 50 feet high, and the inscription is so high up that a mistake might easily be made in copying it from the ground. To make sure I climbed a mango tree standing close in front and copied it from a distance of a few inches only. The oldest tomb in the English cemetery at Bárabáti is dated 1684 and the inscription runs thus—

$$16 \left\{ \begin{matrix} \text{coat} \\ \text{of} \\ \text{arms} \end{matrix} \right\} 84$$

* It is probably from this governor that the Parganahs of Matkatabad and Matkatnagar take their names.

Here lyeth the body of Ann late wife of Captain Francis Wishaw who died ye pmo. 9 ber aged 26 years.

Also the body of Edward his son who deceased the 27th of the same month aged 4 years Anno Dni. 1684.

There were minor settlements at Soroh and Bhadrakh, and the chief article of trade was that in "Sanahs" a peculiar kind of fine cloth which is still occasionally brought for sale to Balasore. This will explain the frequent allusions to the weavers in the early records.

Balramgarhi is situated at the mouth of the Balasore river, and was formerly a large and flourishing place. The native village was washed away in the storm of 1831 and since then the place has been desolate. The old house, however, has lately been repaired and is inhabited.

We have only scattered notices of Balasore from time to time in the various histories. These I proceed to put together into as continuous a narrative as possible, aided by the few vague local traditions which still remain.

In 1685 Balasore was near being abandoned by the English altogether. Shaista Khán the Nawab of Bengal was accused by them, of oppressing their servants and injuring their trade. Apparently the English were not free from blame themselves. However, as usual they carried matters with a high hand, and the Company at home with permission of James II sent out a fleet of 10 ships under Admiral Nicholson with orders to proceed first to Balasore, and remove the Company's servants and break up the factory. He was then to go to Chittagong, fortify it and make it a base of operations and asylum for the English, from which to commence the war, by first attacking Dacca and gradually over-running Bengal.* Nicholson's fleet, however, met with bad weather and eventually arrived at Hughli, and a war ensued which was not brought to a close till 1687; a peace was made in that year but did not last many months. The Company annoyed at the failure of Nicholson's expedition, sent a second under Captain Heath, whose first proceeding was to carry off Mr. Charnock and the Company's servants from "Chuttanutty" (now Calcutta) and taking them on board his ships sail for Balasore. The Governor of that place, whose name is not mentioned, offered to treat with him, but as Heath would not consent to do so, the Governor seized the Company's two factors and imprisoned them. "Heath landed with a party of soldiers and seamen on the 29th November 1688 attacked and took a redoubt of 30 guns and plundered the town of Balasore."† The

* Stewart, p. 312.

† Stewart, p. 321.

fort could only have been at Muhamadnagar near the present Customs Wharf, as there is no other place near the town where a fort could have been of any use. At that place there are still some curious mounds and ridges which closely resemble fortifications, and the position is one which would command the approach to the town by water as well as the shipping in the port. The two unfortunate factors were sent into the interior and never heard of again. After this senseless and purposeless outrage, Captain Heath sailed away to Chittagong, and the native governor very naturally demolished the Company's factory.

Balasore now remained unoccupied by the English till 1691, when a firman was granted by Aurangzeb for the re-establishment of the factories in Bengal. Mrs. Wishaw's tombstone mentioned above has a great hole in it, which looks as if it had been torn up from its original position and probably thrown away, till restored on the re-occupation of the factory by our countrymen. It is the only tombstone of so early a date. The next is to the memory of Mrs. Kelsall, wife of the factor already mentioned, and is dated 1751. Calcutta was not founded till 1690 and it is curious that we hear nothing of Pipli in all these events. It would seem that Balasore had become the more important place of the two.

Nothing more is known of the condition or circumstances of Balasore Factory till 1748. It is said by some writers that on the capture of Calcutta by Surajuddaulah in 1756 the English fugitives took refuge at Balramgarhi. I find no mention of this in the Records, and it would on the contrary appear that Drake and his garrison were on board their ships at Fulta till the arrival of Clive. In 1763 the French fleet was cruising in Balasore roads and captured some English ships (Long, p. 295), which caused a great panic in Calcutta. Two years previous to this, the following curious and interesting entry is to be found in the Government records (Long, p. 250.) "From Latful Neheman (? Rahman) Thanadar of Balasore, January 1761. Some time ago the merchants were wont to send iron, stone-plates, rice and other things from hence to Calcutta, and they brought tobacco and other things from thence to sell here, and therefore the merchants reaped a profit on both. Two years ago Mr. Burdett came here and Jaggernauth was his Mutsooddy and brought a sloop for his own use and intercepted the trade from Balasore to Calcutta. The merchants were so much distressed that they relinquished trade, and many of them left the place and transacted their business at Kunka, where they remain and those that are here are greatly distressed and are always making complaints. I have represented it to him but he will not listen to it. He has left the factory and embarked on board a sloop, and has intercepted the merchant boats and will not permit them to pass."

It will be observed that the trade in stone-plates and rice constituted then as now, the principal export of Balasore.

The only other notice of this period is a petty squabble in 1766 with the Dutch about a rope walk which was made by the English on land claimed by the Dutch. The land was given up by the former.

Commencement of English rule.

When the war broke out with the Marathas, as a part of the general operations, it was resolved to drive them out of Orissa, and while General Wellesley attacked them from the south, and General Lake from the north, and were victorious respectively in the celebrated battles of Assaye and Laswaree, the 1st Madras Fusileers, with two native Madras Regiments all under Lieutenant-Colonel George Harcourt marched from Ganjam and took the town of Cuttack on the 10th October 1803.

At the same time a detachment of troops, European and native, about 1000 strong under Captain Morgan, and Lieutenant Broughton sailed for Balasore. I cannot find where they came from, but it was most probably from Calcutta, as the native troops belonged to the Bengal army and a detachment of the same troops was sent under Col. Fergusson* to Jellasore to protect the Bengal Frontier. They arrived in three ships, and landed at Jampada near Gabgaon a village adjoining old Balasore on the east, and about three miles below the present town. They were in want of provisions, which were supplied to them by Prahlad Nayak, zamindar of old Balasore. They then advanced along the bank of the river, and owing probably to the difficult nature of the ground, were not opposed by the Marathas till they got close to Balighat just below Bárabáti. Here a band of horsemen bore down on them, and in the skirmish which ensued, one European soldier was killed. The English then rushed forward and attacked the Maratha fort, which stood on the the site of the salt gola, and soon took possession of it. The Marathas appear to have made but a faint resistance, and quickly disappeared. Immediately after this, a drum was beaten in all the bazars announcing that the English had taken possession of the province and would protect all who behaved themselves peaceably.

Finding the old factory in ruins Captain Morgan took up his quarters in a new house built by Mr. Wilkinson the last resident and at once set to work to pacify the district and restore order. The date of the capture of Balasore is 21st September 1803.†

* They were the 1st batt. 5th Bengal N. I. and 2nd batt. 7th N. I.—(Balasore Collectorate records 1804).

† (Morgan to Post Master General 26-9-1804 and Grant Duff History of Marathas.)

The news of this success reached Colonel Harcourt before he arrived at Cuttack. The earliest letter in the records of the Balasore Collectorate is one from Colonel Harcourt to Captain Morgan congratulating him. I give it a portion of it.

"In Camp at Burpoorshuttumpore, 25 miles south of Cuttack, 3rd October 1803.

"SIR,

"I have great satisfaction in acknowledging the receipt of yours of the 22nd ultimo and am happy to hear of your successes in Balasore.

* * * *

"I have &c.

"G. HARCOURT,

"*Lieutenant Colonel.*

"*Coming. in Cuttack.*"

This shews that Morgan had taken Balasore before the British force had even reached Cuttack.

Captain Morgan, who appears to have been a rough and ready, but able officer, pushed on a small detachment and occupied Soroh, which for some reason he miscalls Soorrung, on the 3rd October. The first book of copies of letters sent is unfortunately not to be found, and the earliest letter of Captain Morgan's is dated 12th June 1804, but from a large collection of letters in Colonel Harcourt's own hand still in the office, his and Morgan's movements may be clearly traced.

Their first efforts were to learn the geography of the Moharbhanj and Nilgiri Hills, especially the passes, and to open communications with the Rajas of those two States. Spies were sent into "Mohurbundge and Lilliagerhy" as Harcourt writes them, to keep a watch on the chiefs, and Passports were to be granted to their vakeels or representatives should they desire to visit Cuttack.

Soroh was abandoned and the detachment under Lieutenant Slye marched to Jajpore in November. Morgan was at once entrusted with Revenue duties, in that month he is instructed to make it known that "as it is the intention of the Commissioners for the settlement of the Province of Cuttack to give a general acquittal of all arrears of Revenue due to the Sircar, previous to the arrival of the British Troops in the Province, we mean on the other hand not to attend to any complaints which the zamindars, kandytes, mokuddums or ryots may wish to prefer against their former masters" (Colonel Harcourt to Morgan 3-11-1803.) The Moharbhanj Ráni was at this time apparently half afraid to come in, and half disposed to be turbulent. Harcourt writes frequent letters to him, and enjoins on Morgan the necessity of extremely conciliatory conduct to him. A certain Mr. Possman appears to have been up in Moharbhanj

meddling, he is warned that if he does not return at once to Balasore "immediate steps will be taken against him." Moharbhanj, however, does not appear to have quieted down, and two Companies of Infantry one from Balasore and one from Jellasore were sent to Hariharpur (spelt Hurispore and Huriorpcor) "to promote the peace and tranquillity of the Mohurbundge district." Further instructions are to the effect following :

"Having cause to believe that the Rani of Mohurbundge and her adopted son Te-koit* are both desirous of the protection of the British Government being extended to them you will direct the officer proceeding to Huriorpore in command of a detachment, to conduct himself towards the Rannee and Te-koit, or their vakeels with every mark of friendly attention. He may open any necessary communication with them, but you will be pleased to enjoin him to avoid committing himself by any promises or agreements that may be constructed by them as binding on the British Authorities in Cuttack." (Harcourt, 16-11-1803.)

Cuttack now begins to be noticeable as it is at frequent intervals throughout the early years of British rule as a place in constant want of supplies and always on the verge of famine. On 1st December 1803 an urgent call is made for fifteen thousand maunds of rice from Balasore. Again on the 1st June 1804 Captain Morgan is ordered to warn all pilgrims of the great scarcity of rice and cowries at Cuttack, and to endeavour to induce them to supply themselves with provisions before entering the province.

On the 1st September 1804 a third call is made on Balasore for 20,000 maunds of rice which were accordingly despatched in boats from Dhamra and Churaman. A long correspondence follows in the course of which occurs an important letter of Captain Morgan's, dated 27th September and marched "Private" in which he explains the cause of the continual scarcity at Cuttack.

He begins by pointing out that twenty miles north of the Mahanadi there was no scarcity at all, that Balasore had rice in store enough for three year's consumption, and it was selling at 65 seers (of 80 tolas) for the rupee : there were immense stocks at Dhamra and Churaman intended for export to Madras, and consequently he concludes that the scarcity of rice at Cuttack is not natural, but must have been artificially produced. In examining the causes for this state of things he arrives at the following conclusions :

1. The large number of Marathas still resident at Cuttack are bitterly hostile to the English and do their best to stop the import of rice in

* Te-Koit is Tikáit one bearing the tiká (tilaka) or mark of sovereignty, and is the usual title of the heir-apparent to a throne.

the hope of starving us out. They have ceased to import from Sambhalpore as they used to, for the same reason, and having long had relations with the ryots many of whom still hold their advances for grain unliquidated they are able to prevent them from bringing in grain to Cuttack.

2. The ryots have hitherto always been accustomed to give up nothing until they were compelled. The Marathas took what they wanted by force, and the ryots did not understand our mild method of asking for and paying for what we wanted, they took it for weakness, and were so elated at their release from oppression, that they thought themselves quite independent and would do nothing to oblige any one.

3. The Amils were in league against us, as they had for a long time taken advantage of their position to hold the lion's share of the profitable export trade to Madras, and did not wish to sell in Cuttack.

4. The Commissariat officers were shamefully inert and incompetent, and notwithstanding all the above drawbacks could, if they would only exert themselves, collect a much larger supply than they did. Colonel Harcourt appears to have taken some effective steps to remedy this state of things, for no further rice was required from Balasore during the rest of 1804 or in 1805.

Raja Tripati Raj was at this time sent from Cuttack to Balasore to act as Amil or Collector of the Revenue, and was put under Captain Morgan's orders; and Amils were appointed at Soroh, Bhadrakh and Dolgram, who also were directed to send in their accounts to that officer. They all appear to have been thoroughly untrustworthy; making use of every conceivable pretext to avoid doing what was required of them, and carrying that exasperating policy of passive resistance at which the Oriyas are such adepts to the highest pitch. The correspondence teems with complaints against them. They would not collect the revenue punctually, they never knew anything that they were asked about, they could not be found when wanted, denied having received this or that order, sent in their accounts imperfectly drawn up, long after time, and sometimes not at all, and on the whole behaved as badly as any set of men in their position well could. This indeed appears to have been the general tone of every one in the Province. Well aware of our ignorance of the country, they all with one accord abstained from helping us in any way, no open resistance was ventured upon, but all stolidly sat aloof—papers were hidden, information withheld, boats, bullocks and carts sent out of the way, the zamindars who were ordered to go into Cuttack to settle for their estates did not go, and on searching for them at their homes could not be found, were reported as absent, on a journey, no one knew where. But if from ignorance the English officers committed any mistake, then life suddenly returned to the dull inert mass, and complaints were loud and incessant.

The Amil of Bhadrakh was one Mohan Lal, the name of the Amil of Soroh is not given, and during this year it would seem that Soroh and Balasore were incorporated into one Amilship under Tripati Raj.

From the circumstance of our not having Captain Morgan's letters of this period, I am unable to give more than a fragmentary history of the transactions that took place. Notices from time to time occur of parties of Marathas having been seen or heard of here and there, and there is a great search to find the "Ongole or Ungool Pass"; nobody seems to have known where it was.

Sambhalpur capitulated to Major Broughton on the 12th January 1804, and all further fear from the Marathas was thus at an end. On the 9th of the same month came also the news of a peace having been concluded with the Raja of Berar.

The light thrown upon the events of the following sixty-eight years by the tolerably complete series of English letters in the Balasore office will be duly made use of in the succeeding chapters, but I conceive it unnecessary to do more in this chapter than to record the few events of importance that have occurred in the period in question. Captain Morgan remained at Balasore till 19th November 1804 when he made over charge to Mr. Ker, Collector and Magistrate, Northern Division of Cuttack. During his tenure of office he had been first simply "Commanding at Balasore" but during 1804 he had gradually grown into Collector, Magistrate, Salt and Customs Agent and general factotum.

Mr. Ker made the first settlement, which was very summary and simple. It included all the country now lying within the Jajpore Subdivision of Cuttack, and the statements referring to it are, in part at least, still extant. To the north this settlement did not go beyond Bastah, as Jellasore was under Midnapore, and the country east of that place came under a separate arrangement. This tract of country between Jellasore and the sea was called the "Mahratta Mehals" and consisted of the Parganas of Pattaspur, Kamardachaur and Bhograi, together with the smaller mehals of Shahbandar, Napochaur and Kismat Katsahi.

There is one volume of letters sent and one of letters received for the year of Mr. Ker's incumbency 1804-5 but they contain very little of historical importance. In the early part of the year the Raja of Kanika, always a turbulent and refractory person, made an attack with, it is said, 600 armed paiks on the outpost of "Rigagurh," the place where his principal fort and residence was situated, on the lower Brahmini just above the point where it unites with the Baitarni, which was held by a native officer and a few sepoys. Captain McCarthy in command of the Honorable Company's brig "Scourge" who was at the time lying off Dhamrah sent an express to the Commissioners of Cuttack, who deputed a force of 400

paiks to keep order. The Rája and his family were seized and taken to Balasore where they were suitably lodged in a house prepared for them, and guarded by barkandazes. Kanika was brought under the management of Mr. Ker (Secretary to Commissioners 27-2-05 McCarthy to Commissioners 3-3-05.)

In this year also the question was raised of the expediency of removing the Calcutta Road into British Territory. It previously passed through the Moharbhanj and Nilgiri States, and the Rájas of those places under pretence of securing the safety of travellers, were in the habit of levying heavy and vexatious tolls at certain ghats or passes on the road. As they demurred about relinquishing this source of revenue, the road was removed and carried through Rajghat and Bastah to Balasore. The old road was very soon deserted by travellers as the new route through British Territory was found to be much safer and cheaper.

Major Morgan was allowed a salary of 500 Rs. a month for the period he had been in charge of Balasore (Accountant 30-9-05). The Amils who were in charge of Balasore, Soroh and Bhadrakh appear still to have been very troublesome; the correspondence of 1804 and 1805 is full of complaints of their remissness and refusal to obey orders.

Having completed his settlement Mr. Ker on the 29th August 1805 made over charge of his office to Mr. G. Webb who was appointed Collector of all Orissa, or as they persisted in calling it, the zillah of Cuttack. From this date down to 1815 there was no resident British officer in Balasore, or in fact anywhere north of the Mahanadi, and as the Collector lived at Puri in the extreme south of the province, his hold over the zamindars of the north could have been little more than nominal.

It is perhaps to the relaxation of control for many years in Balasore that we may attribute that special characteristic of the inhabitants of the district which leads them to carry on their affairs without any reference whatever to the law or to the officials of the Government. They never take the trouble to enquire what the law is on any point, but if a question arises, settle it in any way that may seem best to them. To the same cause may be ascribed the excessive prevalence of the practice of levying illegal cesses, the existence of many kinds of singular and pernicious customs, and the general muddle of conflicting interests observable in connection with landed property.

As the early years of our rule in Orissa were fertile in changes, and worked a complete revolution in the position of the classes connected with the land, it would have been interesting to trace the progress of our laws and rules and their effect upon the province. I am, however, precluded from doing this by the fact that from 1806 to 1828 there was no

[The abrupt conclusion of the foregoing article is due to the most unfortunate loss of the concluding pages of Mr. Beames' Manuscript while it was passing through the press. This mischance is the more to be regretted, as the lost MS. was the only copy in the author's possession; which precludes any restoration of the concluding portion. Fortunately the lost portion was very small; and the article is practically complete, and contains everything of interest and value.—Ed.]

Relics from Ancient Persia in Gold, Silver and Copper by Major General A. Cunningham, C. S. I., C. I. E.

With one Plate.

[Third Notice.]

Since writing my Second Notice of the very curious and interesting discoveries of Ancient Persian Relics on the northern bank of the Oxus, I have obtained three more gold ornaments, and about twenty more coins in all metals.

The coins consist of a gold Daric and a silver Siglos, of the old Persian mint; a tetradrachm and four drachmas of Antiochus Soter; a gold stater and three copper coins of Diodotus of two different types; a tetradrachm, a silver obolus, and a copper coin of Euthydemus; three tetradrachms of Antimachus Theos, with a drachma and a nickel coin of Agathokles. The silver obolus of Euthydemus is of the standing Herakles type, and is I believe unique. I have again to remark on the continued absence of any Parthian coins, which, as I said before, goes far to prove that the deposit must have been made before the time of Mithridates I, (Arsakes VI). The absence of the coins of Eukratides, the contemporary of Mithridates I, points to the same conclusion; and I now feel pretty confident that the deposit must have been made before their time, and not later than 200 to 180 B. C.

The principal ornament is a gold cylinder of fine workmanship, much superior to that of any Persian gems that I have seen. I have given a photograph of it in the accompanying Plate XXI, marked A, in which it will be seen at once that the cylinder is certainly of Persian origin,—as the conventional figure of Ormazd is represented over each of the doomed prisoners. See Figs. B and C from sculptures at Persepolis.

There are two distinct scenes represented on the cylinder, both illustrating the same subject, of a Persian soldier or chief putting a prisoner to death with his own hand.

In the larger scene there are five figures, two being prostrate dead enemies, on which the other figures stand. The prisoner who is kneeling on one knee, has been wounded in the right knee by an arrow. He holds a short sword in his right hand, and a bow in his left hand, and his head is turned away from the Persian soldier who is piercing him with a spear from above, while he grasps his right wrist. The third figure holds the prisoner's left shoulder with his left hand, while he raises his right hand towards the symbol of Ormazd. The Persian soldier is dressed in the same costume as is seen in the sculptures of Persepolis. He wears a long

robe, and has his bow and quiver attached to his left shoulder behind. From the quiver depend three cords, each finished with a tassel at the end, exactly the same as is seen in the figure of the Persian soldiers at Persepolis. See Fig. E of the Plate from a sculpture.

The smaller scene represents the same subject, but there is only one prostrate enemy, and the Persian soldier who is putting the prisoner to death has no assistant. In this scene the prisoner does not kneel but simply bends forward, while the spear is being thrust into him from above. Here also the symbol of Ormazd is placed over the doomed man. For comparison I have given in the Plate two of these symbols of Ormazd from sculptures at Persepolis.

I have also given a copy of a stone cylinder as an illustration of the art of seal engraving in Persia. See Fig. D. of Plate XXI. The subject is similar to that of the gold cylinder; but the style of workmanship is very much inferior. My chief object, however, in giving it a place in the Plate is to draw attention to the two enemies on the right, who are known to be Scythians from their trowsers and peaked head dresses. One of them has already been captured by the Persian soldier who, while he holds him by the peak of his cap with the left hand, is stabbing him with his right hand. Herodotus, VII—64, describes the Sacæ or Scythians in the army of Xerxes as wearing trowsers and tall stiff caps rising to a point. Over the captive there is a symbol of Ormazd exactly the same as is seen on the gold cylinder.

Now just as these two figures are known to be Scythians by their dress, so the two captives as well as the three slain figures on the gold cylinder may be recognized as Indians by their dress. This dress I take to be the well-known Indian *dhoti*, which is gathered round the waist, and covers the thighs down to the knees. The legs are covered with buskins, such as are still worn by the people of North-Western India and the Panjáb as well as by the bordering Afghans. As it was with these peoples that the Persians came into contact, the Indians would of course be represented as dressed in *dhotis* and *buskins*.

If this identification of the dress be correct, then the gold cylinder must be as old as the time of Darius Hystaspes, who was the only Persian king who had been engaged in war with the Indians.

The cylinder is 1·3 inch in height, and 0·54 inch in diameter. It is very thick and heavy, its weight being 1,520 grains, and its intrinsic value 175 Rupees. It is given full size in the Plate.

The second gold object is a circular disc four inches and three quarters in diameter, 1,500 grains in weight, and 175 Rupees in intrinsic value. See Fig. F, of Plate XXI. It has a border one quarter inch in diameter, ornamented with the conventional Greek representation of water. In the

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The smaller scene represents the same subject, but there is only one prostrate enemy, and the Persian soldier who is putting the prisoner to death has no assistant. In this scene the prisoner does not kneel but simply bends forward, while the spear is being thrust into him from above. Here also the symbol of Ormazd is placed over the doomed man. For comparison I have given in the Plate two of these symbols of Ormazd from sculptures at Persepolis.

I have also given a copy of a stone cylinder as an illustration of the art of seal engraving in Persia. See Fig. D. of Plate XXI. The subject is similar to that of the gold cylinder; but the style of workmanship is very much inferior. My chief object, however, in giving it a place in the Plate is to draw attention to the two enemies on the right, who are known to be Scythians from their trowsers and peaked head dresses. One of them has already been captured by the Persian soldier who, while he holds him by the peak of his cap with the left hand, is stabbing him with his right hand. Herodotus, VII—64, describes the Sacæ or Scythians in the army of Xerxes as wearing trowsers and tall stiff caps rising to a point. Over the captive there is a symbol of Ormazd exactly the same as is seen on the gold cylinder.

Now just as these two figures are known to be Scythians by their dress, so the two captives as well as the three slain figures on the gold cylinder may be recognized as Indians by their dress. This dress I take to be the well-known Indian *dhoti*, which is gathered round the waist, and covers the thighs down to the knees. The legs are covered with buskins, such as are still worn by the people of North-Western India and the Panjáb as well as by the bordering Afghans. As it was with these peoples that the Persians came into contact, the Indians would of course be represented as dressed in *dhotis* and *buskins*.

If this identification of the dress be correct, then the gold cylinder must be as old as the time of Darius Hystaspes, who was the only Persian king who had been engaged in war with the Indians.

The cylinder is 1·3 inch in height, and 0·54 inch in diameter. It is very thick and heavy, its weight being 1,520 grains, and its intrinsic value 175 Rupees. It is given full size in the Plate.

The second gold object is a circular disc four inches and three quarters in diameter, 1,500 grains in weight, and 175 Rupees in intrinsic value. See Fig. F, of Plate XXI. It has a border one quarter inch in diameter, ornamented with the conventional Greek representation of water. In the

middle in very bold relief is represented a man riding a Sea Lion, or Lion with a Fish's tail. The photograph is only one half of the original size.

On Greek and Phœnician coins the Hippocamps or Sea-Horses, are usually represented with wings,* unless when attached to the Car of Poseidon. But I can find no examples of Sea Lions. These animals, however, are found in the old Indian sculptures of the Asoka Buddhist Railing at Mahábodhi, or Buddha Gaya.† There are no holes or loops of any kind on the back to suggest what may have been the possible use of this large plaque. The other plaque with the representation of a hunting scene (already published with my second notice, p. 64) has four holes near its middle boss, as if for the purpose of fastening it by nails to some plain back ground. The Sea-Lion plaque might perhaps have formed the breast ornament of a king's or noble's dress, such as is seen on an Assyrian royal robe in the sculptures of Nimrud. [See Rawlinson's Ancient Monarchies, Vol. I, p. 399.] But there are no holes round the edge by which it could have been sewn on.

The third gold ornament is an Antelope represented in the act of leaping, with its forelegs doubled up, and its hind legs outstretched. See Fig. G of Plate XXI. It weighs 3,020 grains, and its intrinsic value is about 350 Rupees. The photograph is only one half of the original size. The hind legs rest upon an upright flat tablet, one inch and a half in height and one inch broad, with a highly ornamented border on each face. There is an oblong hole under the stomach, half an inch by one quarter, which looks as if it had been intended for the insertion of some slight staff or handle. In this case it might have been carried in the hand as the symbol of some order, just as the Fish (or *Máhi Marátib*) is carried at the present day.

After the above had gone to press, I met a man at Simla who has several times visited the spot where these Oxus relics were found. The place is one stage to the North of the Oxus, and is called *Kawadian*, a large ancient town on the high road to Samarkand. The guess that I made in my first paper on these relics that the find-spot was the old town of *Kobadian* of the Arab Geographers turns out to be correct. I have heard also that the owner of the land has now sold the right of exploration to a single speculator.

* Duc de Luynes, Satrapies, Pl. XV, figs. 44—45 and XV, 46.

† Archæological Survey of India, Vol. III, Pl. 29.

On Goṇikáputra and Gonardíya as Names of Patañjali.—*By* RÁJENDRALÁLA MITRA, LL. D., C. I. E.

[Received Oct. 4; Read Nov. 7, 1883.]

In the Preface to my edition of the Yoga Aphorisms of Patañjali I have quoted, without demur, from Goldstücker's learned essay on Páṇini, a passage in which Patañjali is described to have been the son of one Goṇiká, and the country of his nativity to have been Gonarda. These facts are indicated by the epithets *Goṇikáputra* and *Gonardíya* which occur in the Mahábháshya, and have been so explained by the distinguished exegetists Kaiyaṭa and Nágojí Bhaṭṭa. Nor are other authorities wanting to support this view of the case. Hemachandra, in his well known glossary, the *Abhidhána-chintámaṇi*, gives *Gonardíya* as a name of Patañjali.* Following him Professor Táránátha Tarkaváchaspati, in his dictionary, the *Váchaspatya*, makes Gonardíya a synonym of Patañjali.† The identification, however, notwithstanding these authorities, seems to be still open to discussion, and it is one which is worthy of enquiry.

The only passage cited by Goldstücker from the Mahábháshya in which *Goṇikáputra* is named, is the commentary on Páṇini's Sútra, I, 4, 51. The subject under consideration being the use of the accusative case under certain circumstances, Patañjali, after quoting several kárikás, and discussing all the *pros* and *cons* with appropriate examples, asks, with reference to the last example adduced, "What should be the correct form? (*atheha katham bhavitavyam*) the leader of the horse *to* Srughna," (*netáśvasya srughnamiti*) (accusative), "or the leader of the horse *of* Srughna" (*áhosvinnetáśvasya srughnasyeti*) (genitive), and then concludes by saying, "both according to Goṇikáputra" (*ubhayathá goṇikáputraḥ*)‡. Who this Goṇikáputra is, is not pointed out by him, nor by Kaiyaṭa; but Nágojí Bhaṭṭa explains that he is the same with the great commentator himself, (*Goṇikáputro bháshyakára ityáhu*), and Dr. Goldstücker takes this to be conclusive. Apart from this gloss of Nágojí, no European scholar, however, reading this passage, can for a moment suppose that the author is here giving his own opinion. No European author would do so in such a way, and it is rarely that Indian authors indulge in such egotisms. There are a few doubtful instances, but, those apart, the practice is quite

* याज्ञवल्क्यो ब्रह्मराचिर्यागेशोऽथ पाणिनी।
शालातुरीय-दाक्षेयौ गोनर्दीये पतञ्जलिः ॥ ५१५ ॥

† पतञ्जलिमुनौ।

‡ Kielhorn's edition, p. 336. All the quotations from the Mahábháshya, except when otherwise specified, have been taken from the same edition, and the page references refer to it.

different. Certain it is that Patañjali has to give his opinion at an average once in every tenth line in the course of his elaborate exegesis of over 22,000 lines of 32 letters each, and he always does so by the use of participles, such as *jñeyam* "it should be known," *kartavyam* "it should be done," *vaktavyam* "it should be said," and by other devices, and not by naming himself in the third person. Sometimes, but not often, he appears under the ægis of the modern editorial dignity of the first person plural "we," (*vayantu brumaḥ*, p. 15,) but never under the third person, nor under the name of Patañjali. The question therefore is not easily solved why he should have preferred the derivative and not-very-honorific Goṇikáputra to his own personal name. I have not had an opportunity of lately reading the whole of the Mahábháshya with the special object of finding out how many times the word Goṇikáputra has been used in it; but in the first volume of the work as edited by Dr. Kielhorn and comprising about one-third of the entire text, this is the only instance, and its evidence leans heavily on the other side: at any rate it is certainly not conclusive.

Of Gonardíya the internal evidence is even more unsatisfactory. It occurs twice in the volume above referred to, and in both places in such a dubious, misleading way as not to justify the conclusion arrived at. The first time I meet with it is in Sútra I, 1, 21. The question at issue there is, how should the rules referring to initial and final letters apply to cases where there is an only letter in a word, and the Sútra lays down that the case is the same "in solitaries as in initials and finals."* This gives rise to a long discussion on the necessity, purport, and use of the rule, and Patañjali, after citing a number of vártikas, comes to the conclusion that the rule is not necessary.† He then cites a vártika which says, "Initiality and finality are effected in a solitary letter from the characteristics of its having nothing preceding and nothing following."‡ Commenting on this, he continues, "the character of having nothing preceding is initiality, and the character of having nothing following is finality; this occurs also in solitarity, *i. e.*, from the circumstance of the character of nothing preceding and nothing following (in a word of a single letter) the operations enjoined for initials and finals must take place in solitary letters, and there is no use in saying (as is done in the Sútra) "in the same way as in initials and finals,"§ *i. e.*, the solitary is by its very nature both initial and final, and there is no necessity in saying that the solitary is governed in the same way &c., and the aphorism is redun-

* आद्यन्तवदेकस्मिन्।

† आद्यन्तयद्भावश्च प्रक्लोऽवक्तुं।

‡ अपूर्वानुत्तरत्वलक्षणत्वादाद्यन्तयोः सिद्धमेकस्मिन्।

§ अपूर्वत्वलक्षण आदिरनुत्तरत्वलक्षणोऽन्तः। एतदेकस्मिन्नपि भवति। अपूर्वानुत्तरत्वलक्षणत्वादेतस्मात् कारणादेकस्मिन्नप्याद्यन्तोपदिष्टानि कार्याणि भविष्यन्ति नार्थ आद्यन्तवद्भावेन।

dant. He then adds, "but Gonardíya says, 'it is true when there are others,'" (*Gonardíyas tváha satyam etat sati tvanyasminniti*), *i. e.*, the rule is necessary because the terms initial and final are not applicable without the presence of other letters. Kaiyaṭa paraphrases the first part of this passage by the words *bháshyakáras tváha*—"but the Bháshyakára says."

Nágójí Bhaṭṭa, who comments on the gloss of Kaiyaṭa, says on this passage, "he (Kaiyaṭa) now explains the word Gonardíya; it is the Bháshyakára," (*Gonardíyapadam vyachashṭe, bháshyakára iti.*). These explanations, however, do not meet the requirements of the case. The saying of Gonardíya is so brief and obscure that I cannot flatter myself with the idea that I have understood it correctly; but as it stands following the disjunctive particle *tu* "but," it means something distinct from what the vártika quoted lays down, and Gonardíya to all appearance seems to be distinct from Pataṉjali. Pataṉjali quotes a vártika in support of his opinion, and cannot be expected to set it aside by appearing himself under the name of Gonardíya, though he may well cite the opinion of a predecessor who differed from him and that without any remark.

The second citation occurs in the comment on Sútra I, 1, 29. The rule lays down that the words included in the class *sarva* &c., should not be reckoned as *sarvanámas* if they form a part of a *bahuvríhi* compound. Commenting on this, Pataṉjali shows that the rule is necessary, and its object cannot be subserved by reference to those rules by which the *sarvanámas* are made to be the first member of a compound. Besides, there is a rule which enjoins the use of the affix *akach* after *sarvanámas*; and if the present rule be reckoned redundant, the use of that affix would be justified in the case of *bahuvríhi* compounds with *sarvanámas* instead of *ka*, and the result would be that in the case of the words *asmat* and *yushmat* followed by *pitṛi*, the use of the affix *akach* would be justified, and the words produced would be *makatpitṛika* and *tvakatpitṛika*, whereas the forms desiderated (*ishyate* and proper) are *matkapitṛika* and *tvatkapitṛika*. Discussing then a question about the effect of rules regarding subsidiaries on those regarding essentials (of Kielhorn's *Paribhashendu-sekhara*, pp. 221f.) the commentator decides that the rule is necessary. He then adds—"But Gonardíya says, the affix *akach* and the accent on the first vowel* should be adopted without any hesitation in either member of the compounds, and the forms should certainly be *tvakatpitṛika* and *makatpitṛika*."†

* The *Udátta* change in the vowel is enjoined in the Phiṭ sútras, *Svangaśitámadantamam* &c., and *Śiṭ sarvanáma*.

† न बहुव्रीहौ ॥ १ । १ । २९ ॥

किमुदाहरणम् । प्रियविश्वाय । नैतदस्ति प्रयोजनम् । सर्वाद्यन्तस्य बहुव्रीहेः प्रतिषेधेन भवितव्यम् । वक्ष्यति चैतत् । बहुव्रीहौ सर्वनाम संख्ययोरुपसंख्यानमिति । तत्र विश्व-

The question now is, whether the half s'loka quoted is really a quotation, or a summing up of the argument? The argument led to the conclusion that the logical form should be *matkapitṛika* and not *makatpitṛika*, and the last is pronounced to be the right form on the authority of Gonardíya without any argument in support of it. This is not the way in which Patan̲jali advances his opinion. He is invariably very careful in fortifying his position by the citation of all the rules that bear upon it. Nor does he break out into a half verse in giving his conclusion. Whenever he cites his own *kárikás* or *ishṭis* he invariably immediately after paraphrases them in different and, what comes to be, easier language. Nothing of the kind has been done here. Further, the question at issue is the use of the affix *akach*, and nothing in the prose remarks has been said about the initial vowel becoming a *udátta*, but the verse quoted refers to it, and that shows that the verse is a quotation, and that, in order to preserve the integrity of his quotation, Patan̲jali had to take it as it stood. The particle *tu* "but" also suggests that the opinion about to be quoted was opposed to the conclusion arrived at before. Had Patan̲jali improvised the verse for the occasion, he could have easily written it without reference to the accent on the vowel. It is true that the word Gonardíya here in Dr. Goldstücker's photolithographs is not followed by that conjunction; but in Dr. Ballantyne's edition from which the passage has been quoted below, as

प्रियायेति भवितव्यम् ॥ इदं तर्हि । द्व्यन्याय त्र्यन्याय । ननु चात्रापि सर्वनाम्न एव पूर्वनिपातेन भवितव्यम् । नैषदोषः । वक्ष्यत्येतत् । संख्यासर्वनाम्नोर्यो बहुव्रीहिः परत्वात्तत्र संख्यायाः पूर्वनिपातो भवतीति ॥ इदं चाप्युदाहरणम् । प्रियविश्वाय । ननु चोक्तं विश्वप्रियायेति भवितव्यमिति । वक्ष्यत्येतत् । वा प्रियस्येति ॥ न खल्वप्यवश्यं सर्वाद्यन्तस्यैव बहुव्रीहेः प्रतिषेधेन भवितव्यम् । किं तर्हि । असर्वाद्यन्तस्यापि भवितव्यम् । किं प्रयोजनम् । अकज्माभूदिति । किंच स्याद्यद्यत्राकच् स्यात् । को न स्यात् । कश्चेदानीं काकचोर्विशेषः व्यञ्जनान्तेषु विशेषः । अहकं पितास्य मकत्पितृकः त्वकं पितास्य त्वकत्पितृक इति प्राप्नोति मत्कपितृकः त्वत्कपितृक इति चेष्यते । कथं पुनरिच्छतापि भवता बहिरङ्गेण प्रतिषेधेनान्तरङ्गो विधिः शक्यो बाधितुम् । अन्तरङ्गानपि विधीन्बहिरङ्गो विधिर्बाधते गोमत्प्रिय इति यथा । क्रियते तत्र यत्नं प्रत्ययोन्तरपदयोश्च [७. १ १७] इति । ननु चेहापि क्रियतेन बहुव्रीहाविति । अस्त्यन्यदेतस्य वचने प्रयोजनम् । किम् । प्रियविश्वाय । उपसर्जनप्रतिषेधेनाप्येतत् सिद्धम् ॥ अयं खल्वपि बहुव्रीहिरस्त्येव प्राथमकल्पिकः । यस्मिन्नैकपद्यमैकस्वर्यमेकविभक्तिकत्वं च । अस्ति तदार्थ्यात्ताच्छब्दं । बहुव्रीह्यथानि पदानि बहुव्रीहिरिति । तद्यत्तादर्थ्यात्ताच्छब्द्यं तस्येदं ग्रहणम् ॥ गोनर्दीयस्त्वाह ।

अकच्स्वरौ तु कर्तव्यौ प्रत्यङ्गं मुक्तसंशयौ ।
त्वकत्पितृकः मकत्पितृकइत्येव भवितव्यमिति ॥

Ballantyne's Edition, pp. 469 *f.*

also in the Benares lithograph of Professor Bála Sástrí (p. 117), it is put in and it seems to be required and appropriate. Dr. Kielhorn has not noticed it even in his table of variants, owing, apparently, not to his having had those editions before him.

This view of the case, however, is opposed to that of the exegetes. Having already expounded the meaning of Gonardíya in the comment in the first Sútra where it occurs, of course neither Kaiyaṭa nor Nágojí takes note of it here. But Bhaṭṭojí Díkshita, in his Siddhánta Kaumudí, when explaining the sútra under notice, alludes to the passage attributed to Gonardíya as that of the Bháshyakára, *i. e.*, Patañjali. His words are: *Bháshyakárastu tvakatpitriko makatpitrika iti rúpe ishṭápattim kritvaitatsútram pratyáchakhyau.* There is nothing to show how the commentators would explain the difficulties I have pointed out above. No question was raised in their time, and therefore nothing was said. It is, however, easy to suppose that had the inconsistencies and contradictions been called to their notice, they would have urged that what I take to be the opinion of Patañjali were anticipatory adverse opinions (*púrvapaksha*), and that the final conclusion occurs in what I take to be a quotation. To my mind the logical sequences and the expressions used would not be consistent with such an interpretation.

Following my view of the case, it may be urged that there is nothing improbable in Patañjali's quoting the opinions of those who had preceded him. It is not at all unusual for him to cite the authority of his predecessors. Apart from the fact of his work being in a manner a running commentary on the vártikas of Kátyáyana, we find him repeatedly naming others, sometimes in support of his own opinions, and sometimes to refute adverse principles.

Śákala is an ancient author, and his name occurs several times in the Mahábháshya as an authority.* Vájapyáyana is an author whose name occurs nowhere in connexion with any Sanskrit work, but Patañjali cites him as an authority with the highly honorific title of Áchárya.† Vyáḍhi is honoured in the same way.‡ Another, Várshyáyaṇi, is honoured with the higher title of Bhagaván, and the verb put by his name is the same (*áha*) which occurs against Gonardíya,§ and his name is perfectly unknown in our days as an author. Dákshyáyaṇa is cited only as a compiler.‖ Men

* उभः शाकलस्याचार्यस्य मतेन प्रगृह्य संज्ञा भवति । p. 72.
Again, शाकलस्याचार्यस्य मतेनकं विभाषा यथा स्यात् । p. 72.

† बाहुल्यविधानादेकं शब्दं विभक्तौ वाजप्यायन आचार्यो न्याय्यं मन्यते । p. 242.

‡ द्वयभिधानं खाडिराचार्यो न्याय्यं मन्यते । p. 244.

§ षड्भावविकारा इति ह स्माह भगवान् वार्ष्यायणिः । p. 258.

‖ शोभना खलु दाक्षायणस्य सङ्ग्रहस्य कृतिः । p. 468.

of less repute are cited as belonging to the school of Bharadvája,* or simply as "other grammarians."† And if Patanjali thought proper to cite these authorities, there is no *á priori* reason that he should not name Gonardíya or Goṇikáputra.

It might be said that we have nowhere seen Gonardíya and Goṇikáputra cited as authors, and we assume the existence of authors who probably never existed. Such a line of argument, however, is not admissible. When a trustworthy author quotes from an unknown author, we are bound to take for granted that the unknown author did exist, though his work may have long since died out. We follow this principle in the case of Sákala and Vájapyáyana, and there is no reason why we should not do so in that of Gonardíya.

Nor is it necessary to depend on this logical principle in the present instance. In the *Káma-sútra* of Vátsyáyana, there are the most incontestable proofs in support of the assumption. A learned correspondent, Paṇḍit Rámachandra, of Alwar, has lately drawn my attention to that work, and I find in it both Gonardíya and Goṇikáputra cited several times as authorities whose opinions were worthy of the respect from the author of that work. Thus, I find in Chap. I, sec. 4 on the subject of wives:

न ह्यतोऽन्यद् गृहस्थानां चित्तग्राहकमस्तीति गोनर्दीयः ।

And further on, न च मूलकारिका स्यात् न ह्यतोऽन्यत्प्रत्ययकारणमस्तीति गोनर्दीयः ।

Again, चेष्टा भयाच्च निगूढसम्भावनार्थिनी स्यादिति गोनर्दीयः ।

Again, गुणेषु सोपभोगेषु सुखमाकल्पात् तस्मात् ततो विशेष इति गोनर्दीयः ।

In section V, on unchaste women, यं कञ्चिदुज्ज्वलं पुरुषं दृष्ट्वा स्त्री कामयते तस्या पुरुषोऽपि योषितं प्रपेचायितुं न प्रवर्तते इति गोणिकापुत्रः ।

Again, in Chapter VI, on zenana women, ते हि भयेनार्थेन चान्यं योजयेयरिति तस्मात् कामभयार्थेऽपि प्रदानं स्थापयेत इति गोणिकापुत्रः ।

Again, प्रथमसाहसायां स्त्रीभावायां चेति गोणिकापुत्रः ।

Again, संस्कृतयोरपि असंस्कृताकारयोरस्तीति गोणिकापुत्रः ।

None will, I venture to think, question, in the face of these quotations, the existence of Goṇikáputra and Gonardíya as authors of repute; but it might be said that the quotations do not suffice to prove that the two were separate authors. It might be supposed that the one and the same

* भारद्वाजीयाः पठन्ति । p. 136.
Ditto, p. 201.
Again, क्वचापि यथा भारद्वाजीयाः पठन्ति तथा भवितव्यं प्रतिषेधेन । p. 291.

† इहान्ये वैयाकरणाः समस्यते विभाषा न्येयमारभन्त । p. 87.

person had two names, and those names belonged, as stated by Goldstücker on the authority of Kaiyaṭa and Nágojí Bhaṭṭa, to Patañjali. Such, however, was not the case. In the very first section of the work there occur the words गोनर्दीयाभाय्याधिकारिकं। गोणिकापुत्रः पारदारिकं।

Again, in describing Náyikás or amatory females, in section V, of Chapter I, Vátsyáyana begins by saying, "Náyikás are of three kinds: virgins, twice married, and prostitutes." He then adds, "on the other hand, for special reasons a (married) woman taken by a stranger is the fourth kind; so says Goṇikáputra. The fifth class is the widow, according to Chárâyaṇa; the sixth is the female ascetic according to Suvarṇanábha; the seventh is the daughter of a prostitute, a maid-servant, one who has not been taken by any one before, according to Ghoṭakamukha; the eighth is the woman who, having surpassed her youth, is in the full bloom of her beauty and womanhood, according to Gonardíya."* Here we have two different authors entertaining two different sets of opinion—Goṇikáputra adopting the fourfold division, and Gonardíya the eightfold,—and it is impossible to take them to be *aliases* of Patañjali. Whoever they were, and whatever the names of their respective works, it is unquestionable that they were authors of sufficient eminence and authority to be worthy of citation by Vátsyáyana.

The fact of the two authors having been distinctly separate being thus established, the question suggests itself, when did they live? To this no direct categorical answer can be given; but it is obvious they lived before Vátsyáyana who lived long before the author of the Mahábhásbya. Patañjali gives the rule for the derivation of the name Vátsyáyana,† but does not say who this worthy was. Grammatically the word implies a descendant of the sage Vatsa by his son Vátsya, but it is generally used as an individual personal name, a proper noun, and not as a generic term. Hemachandra, in his glossary, says it was a name of Chánakya, who also bore the names of Vishṇugupta, Mallanága, Kauṭilya, Pakshila Svámí, Drámila and Aṅgula.‡

* नायिकास्त्रिविधः कन्या पुनर्भूः वेश्या चेति। अन्यकारणवशात् परपरिग्रहीतपूर्वा चतुर्थी गोणिकापुत्रः। तथैकदेशचारिणी काचित् कन्या वा कार्यसम्पादिनी विधवा पञ्चमीति चारायणः। सैव प्रव्रजिता षष्ठीति सुवर्णनाभः। गणिकाया दुहिता परिचारिका वानन्यपूर्वा सप्तमीति घोटकमुखः। उत्क्रान्तबालभावाकुलयुवतिरूपलावण्यादष्टमीति गोनर्दीयः।

† प्रत्ययग्रहणं चापत्यस्य प्रयोजनं। यत्रिञोः फङ्भवति। गार्ग्यायणः वात्स्यायनः परमगार्ग्यायणः परमवात्स्यायनः॥ p. 88.

‡ वात्स्यायनो मल्लनागः कौटिल्यश्चणकात्मजः।
द्रामिलः पक्षिलस्वामी विष्णुगुप्तोऽङ्गुलश्च सः॥

It would appear that the original personal name of the individual was *Vishṇugupta*, "the protected of Vishṇu," which is a fair index to the religion which his father professed. In the Púrvapíṭhika of the Mudrá-rákshasa there is a story which says that Vishṇugupta and his parents were, by order of the Nanda king, confined in a dungeon where they had nothing to eat but gram (*chanaka*), hence the name Chánakya, but the work is of modern date and its attempt at derivation is obviously fanciful. (Notices of Sanskrit MSS. IV, 227.) Hemachandra's *Chanakátmaja* shows that he was the son of one Chanaka, whence the name Chánakya, a very appropriate patronymic. He was a descendant of the Vátsya clan, whence Vátsyáyana. He was the Machiavelli of his age, and the many complicated schemes by which he dethroned the Nandas and gave the kingdom of Páṭaliputra to Chandragupta, got him the nickname of Kauṭilya, the "tortuous," or "wicked," or "crafty one." The epithet Mallanága means "the serpent among heroes," and perhaps bears relation to the insiduous tactics by which he overcame the army of the Nandas. As a student of Nyáya his memory was so strong that he could remember for a fortnight a thesis once told him, and hence the name Pakshila Svámí.* The epithet Svámí shows that he had at the last stage of his life become an ascetic preceptor. As Drámila he is known as a poet. I have not heard the name Aṅgula associated with any Sanskrit work, ancient or modern. Now, this Vátsyáyana lived at the time of Alexander's invasion of India, and, bearing in mind the fact of the extreme reluctance displayed by Indian authors to cite the authority of their contemporaries, the inference would be almost inevitable that Gonardíya and Goṇikáputra must have lived long before that time. On the other hand Patañjali lived considerably more than a century after the time of Alexander, and it would have been by no means inconsistent for him to quote from authors who had acquired the halo of at least three, and probably four or five, centuries, antiquity before him, and who had two centuries before been quoted by Vátsyáyana.

Respect for the dictum of Kaiyaṭa might induce some to urge—though it would be more a cavilling than an argument—that there may have been a Gonardíya and a Goṇikáputra before the time of Vátsyáyana and necessarily long before that of Patañjali, and yet there was nothing to prevent Patañjali from bearing those epithets as his *aliases*. The manner, however, in which those names have been cited leaves no room for the entertainment of such an opinion; and after all it would amount to a mere *ipse dixit* without a scintilla of proof.

The last issue in the case is a purely personal one, and it is just what an Indian like me cannot approach without the greatest diffidence. Kaiyaṭa, Hemachandra, Bhaṭṭojí Díkshita, and Nágojí Bhaṭṭa are the most renown-

* This is, however, said of Pakshadhara Miśra, a much later author.

ed among mediæval Sanskrit grammarians, and their dicta in regard to the special subject of their study are received throughout India with the highest consideration, and without a single demur. It is extremely hazardous, therefore, for people in the present day to call their opinions into question, even when a very strong array of arguments may be brought forth against them. The question at issue, however, is not a grammatical, but an historical, one, and, however great they may have been as grammarians, they certainly were not very careful and critical in historical matters, and an error on their part in the identification of ancient authors is not such as would be impossible, or calculated to detract from their renown as grammarians. It is obvious, too, that the error in the case of Nágojí Bhaṭṭa who lived about 250 years ago, was one of mere copying. He was engrossed with the grammatical questions he had to deal with, and never thought of enquiring into the authority of his predecessors regarding the identification of obscure names, a branch of study which seldom engaged their attention, and gross anachronisms in that respect were easily passed over. Certain it is that he has given us no clue to the identification of any one of the old names which occur in the Mahábhásbya. The same may be said of Bhaṭṭojí Díkshita who preceded him by about two or three hundred years. He had Hemachandra's Glossary before him and probably by heart, and that told him Gonardíya was another name for Patañjali, and straightway he adopted it, as for his purposes that was sufficient. Hemachandra flourished in the eleventh century, and to him the authority of Kaiyaṭa was evidently quite sufficient. The original error rests, therefore, with Kaiyaṭa, and Kaiyaṭa alone. If this error be not admitted, we have to fall on the second branch of the alternative and to believe that the Goṇikáputra and the Gonardíya of Vátsyáyana were different, and Patañjali had these two names as his *aliases*, which he used in his work in a very inconsistent and absurd manner to indicate himself in the third person, though he never even for once used his individual personal name for such a purpose. Put in this form the first branch of the alternative is one which impartial criticism will accept as the right one. In support of this view I find a remarkable sentence in a paper published in the August number of the *Indian Antiquary*, p. 227, in which Dr. Kielhorn says, "I hope elsewhere to show by the help of Bhartṛihari's commentary that later grammarians are wrong in identifying Gonardíya with Patañjali." I regret I have not a copy of that commentary at hand to work out the problem for myself. Anyhow, for the present, I give up the inference drawn from the passages above quoted that Patañjali was the son of Goṇiká and a native of Gonarda.

The town of Bulandshahr.—*By* F. S. Growse, C. I. E.

(With two Plates.)

In 1824, when the present district of Bulandshahr was first formed, the town bearing that name was selected for its capital, chiefly on account of its very convenient and central situation.

Though a place of immemorial antiquity, it had fallen into decay centuries ago and had ultimately dwindled down into a miserably mean and half-deserted village. A ragged and precipitous hill, on the western bank of the narrow winding stream of the Kálindi, was all that remained of the old Fort, or rather of the succession of Forts, that in the course of 3000 years had been built, each on the accumulated debris of its predecessor. On its summit was an unfinished mosque, commenced by Sábit Khán, the Governor of Kol, in 1730, and huddled about it were some fairly large, but mostly ruinous, brick houses, occupied by the impoverished descendants of the old proprietory community and of local Muhammadan officials, such as the Kázi and the Kánungo. The rest of the population consisted of a small colony of agricultural labourers, scavengers and other menial tribes, who had squatted in their mud huts at the foot and to the west of the hill, where low mounds and ridges of broken bricks and pot-sherds, the vestiges of former habitation, alternated with swamps and ravines that collected the drainage of all the surrounding country and passed it on to the river.

Only sixty years have since elapsed and out of such unpromising materials there has now been developed as bright, cleanly and thriving a little town as can be found anywhere in the Province. The population has increased to upwards of 17,000, but it is still of much less commercial importance than the flourishing mart of Khurjá, which is only ten miles to the south and has the further advantage of possessing a station of its own on the main line of the East Indian Railway. It is, however, a matter for congratulation that in determining the site for the head quarters of the district the larger town was not given the preference; for in point of sanitation there is no comparison between the two places, Bulandshahr by reason of its well-raised site and facilities for drainage being as healthy as Khurjá is notoriously the reverse.

The only ground for regret is that when the old historical site was adopted, the old historical name of Baran was not also restored. Bulandshahr, which—in English characters especially—has a most cumbrous and barbaric appearance, has no literary authority. Apparently it was imposed by the Muhammadans during the reign of Aurangzeb, when the ruling power was possessed with a mania—like the modern French—for the abolition of every name that suggested recollections of an earlier dynasty. In large towns, such as Mathurá and Brindaban, where also the experiment

was tried, the popular appellation was too strongly rooted in the affections of the people to admit of suppression by imperial edict; but in a little place like Baran, where too the majority of the inhabitants happened to be Muhammadans, there was no difficulty in giving effect to the official innovation. The most favourable opportunity for reviving the older and shorter name has unfortunately been lost, but even now the change might be effected without causing more than a very slight and merely temporary inconvenience; for the name Baran is still perfectly familiar to the people and even officially is used as the designation both of the Pargana (or Hundred) and also of the parish, which is a very extensive one; the title Bulandshahr being applied exclusively to the town, and originally only to the Upper Town, or Fort. In meaning, it corresponds precisely with the English 'Higham,' and was suggested by the great elevation of the Castle Hill, which far overtops any other ground for many miles away. It is said by some to have been merely an Urdu rendering of the Hindi Uncha-nagar, a form that had already come into use and would bear the same signification; but, in the absence of any documentary proof of this assertion, I very strongly doubt whether the Hindus under the Delhi Emperors ever knew the place by any other name than that of Baran. There would seem to be no reason why they should substitute one indigenous name for another; while the object that the Muhammadans had, in introducing a name from their own vocabulary, is easily intelligible.

Tradition goes that in prehistoric times the town was called Banchhati—which would mean 'a forest-clearing'—and that it was founded by a Tomar, or Pándava chief from Ahár, named Parmál. The site of this original settlement is the high ground now occupied by the Collector's House and the new Town Hall, and lies immediately to the west of the modern town. It used to be known as the 'Moti Chauk,' or 'Moti Bazár,' meaning of course not a market where 'pearls' (*moti*) were sold, but simply a 'handsome' bazar, as we might say in English, 'a gem of a place.' The large original mound has for many years been intersected by the high road, and was also cut up by a broad and deep ravine. This latter ran down through the town to the river and was a great nuisance. I have now turned back the drainage into a tank called the 'Lál Diggi,' further to the west, near the Magistrate's Court, the overflow from which is carried by a cutting through the fields into the river higher up in its course.

In order to fill up the ravine I levelled the ridge on its bank and having enclosed the entire area as an adjunct to the Town Hall, am now converting it into a public garden, which—to perpetuate the old tradition—I have designated the 'Moti Bagh.' There is much vague talk of coins and solid bars of silver discovered there in former years, but in the course of my excavations I came upon nothing of much intrinsic value. Abundant proofs

were, however, afforded of the interesting fact that in old times it had been occupied by Buddhists. Among my discoveries were several specimens of the curious plain stone stools, such as are figured in Plate III of Vol. XV of the Archæological Survey. General Cunningham says they are found of the same general pattern from Taxila to Palibothra and only at Buddhist sites. They were all about 6 inches high, and a foot long; but not one was unbroken. The ground had been so often disturbed before, that it was not possible to trace any definite line of building, but the fragments of walls and pavements yielded an enormous number of large and well-burnt bricks, each measuring as much as a cubit in length by half a cubit in breadth and three inches in thickness. They were mostly marked on one side by two parallel lines drawn by the workman's finger in the damp clay. Many were broken in digging them out, but many also had been laid in a broken state, as was evident from the appearance of the fracture.

Of more exceptional interest were the remains of what would seem to have been a special local manufacture, being some scores of strange earthenware flask or vase-like objects (Plates XXII and XXIII, figs. 2, 3, 4). They are all alike in general shape, being pointed at one end like a Roman amphora and with a very small orifice at the other for a mouth; but they vary very much in the patterns with which they have been ornamented, and are of different size, weight and thickness. Some apparently had been squeezed out of shape, before the material of which they were made had had time to dry. The spot where they were found is evidently that where they were baked; for, besides the failures, there was also a large accumulation of broken pieces, all mixed in a deep deposit of ashes and the other refuse of a potter's kiln. I sent one to the British Museum, where it was considered so curious that I have been asked to supply some more; and others were exhibited at a meeting of the Asiatic Society of Bengal; but from neither quarter have I received any suggestion as to the purpose for which they were intended.

Most natives who have seen them think they were meant to hold either gunpowder or oil, which is what the shape suggests; but the material, on account of its weight, seems unsuitable for such a purpose, if the flask was to be carried about on the person; while the pointed bottom makes it awkward for storing. The idea has also been hazarded that they were meant to be filled with gunpowder and then exploded as a kind of fire-work; but, if this were their object, there would scarcely have been so much trouble spent on their ornamentation. A third theory, which has found much favour on the spot, but which at the time I was inclined to reject as altogether untenable, is that they were intended to form a balustrade for a balcony or the roof of a house. At first my own impression was that they were not at all likely to be of the same age

as the bricks. The site might have been originally occupied by a fort or a monastery and then deserted for centuries before the potters came and set up their kilns on it, making use—for their houses and workshops—of any old building-materials they happened to light upon. But finally I came to the conclusion that the balustrade theory was not so very far wrong, and that these curious objects were manufactured in such numbers in order to serve as finials for miniature Buddhist stupas. The dedication of such votive memorials was a recognized duty on a pilgrimage, and it would obviously be a convenience for worshippers to have an establishment for their manufacture and sale in immediate connection with the shrine. This view is strongly confirmed by the discovery on the same spot of what is unmistakeably a finial (Pl. XXIII, figs. 3, 4, in ½ size). It is of similar configuration and has a similar orifice at one end, which in this case is clearly intended for the admission of a supporting rod. But later again I found a circular flask (Plate XXII, fig. 2, in ½ size), which is of the same material and of equal weight and is ornamented in exactly the same style. It is, however, easy to grasp in the hand, and apparently was intended to hold oil or some similar fluid, for pouring out drop by drop. Thus the only definite conclusion at which it is safe to arrive is that various articles for different uses were turned out at the same factory, all being characterized by ornamentation of a peculiar local pattern.

Most fortunately the presiding genius of the shrine has also been revealed. The sculpture was dug up some twenty years ago and since then had been kept in an adjoining garden; but several people distinctly remember its being found on the same spot where the recent excavations have been made. The stone is a square block measuring in its mutilated state 1 foot 4½ inches either way, the material being a black trap, not the *sang-músa*, or black marble, of Jaypur. The principal figure represents the Buddha, enveloped in a thin robe reaching to the wrists and ankles and falling over the body in a succession of narrow folds. His arms are slightly raised in front of his breast, and the thumb and forefinger of his left hand are joined at the tips, while with his right hand he touches its middle finger, as if summing up the points of an argument. On either side of his throne is a rampant hippogriff, with its back to the sage and rearing its head over a devotee seated in an attitude of prayer. The throne is supported on two recumbent lions, flanked by Hindu caryatides with impossibly distorted limbs as usual; and at the base again are other devotees kneeling on either side of the footstool, the front of which is carved with the mystic wheel between two couchant deer. The upper part of the stone has been broken off, carrying with it the head of the principal figure, but what remains is in good preservation and has

been well executed. On a ledge in a line with the feet is an inscription in characters apparently of the 9th or 10th century, which reads as follows :

Ye dharmmá hetu-prabhavá hetus teshán tathágato hyavadat teshám cha yo nirodha, evam-vádi mahásramaṇaḥ.

This would be in English "All things that proceed from a cause, their cause as well as their destruction the Tathágata has declared : such is the dictum of the great philosopher." It is curious that a popular symbol of faith should have been framed with so much tautology in so short a compass, and also with such inadequacy of expression. For the cardinal feature of the doctrine, *viz.*, that effects can only be destroyed by destroying their causes, is not stated at all but merely implied.

Another very curious find was a terra cotta seal (Pl. XXIII, fig. 5, in full size), probably some 1400 years old, but as fresh and clear as if it had been baked only yesterday, and still showing the pressure of the workman's fingers who had handled the clay while it was yet damp. It was inside a closed earthen jar, which accounts for its excellent preservation. It is oval in shape, with a dotted rim, and is divided by two parallel lines across the centre into two equal compartments. In the upper are two devices, one of which is a conch shell, the other—which is raised on a little stand—looks like a wing, and may possibly be intended to represent the *chakwá*, or Bráhmani duck, so frequently introduced in old Indian painting and sculpture. In the lower compartment is the name 'Mattila,' in characters of about the 5th century A. D.

It is quite possible that the Fort on the river-bank may also have been founded by Parmál, for the protection of his infant town of Banchhati. Tradition, however, ascribes it to one of his successors, who is made to bear the name of Ahi-baran, interpreted to mean 'cobra-coloured.' But this appears to me to be absolutely untenable. Baran is certainly not the Sanskrit word *varna*, 'colour,' but *varana*, 'a hill-fort or enclosure;' and Ahi-baran would thus mean 'snake-fort' or 'Nága fort,' in the same way as Ahi-kshetra means 'Snake-land.' No Rája Ahi-baran, I should conjecture, ever existed, though there may well have been an Ahibaran Rája, the town being so called because it was a stronghold of the Nága tribe. Nor is it impossible that the epithet 'Nága,' like the English 'reptile,' may have been attached to a Buddhist community by their Brahmanical neighbours by way of reproach. Another explanation may, however, be suggested. Some twenty-one miles to the north-east of Bulandshahr, on the right bank of the Ganges, is the small town of Ahár, which (according to local tradition) is the spot where, after Paríkshit, the successor of Rájá Yudhishṭhir on the throne of Hastinápur, had met his death by snake-bite, his son Janamejaya, to avenge his father's death,

performed a sacrifice for the destruction of the whole serpent race. Though still accounted the capital of a Pargana, it is a miserably poor and decayed place with a population, according to the last census, of only 2,414. It is evidently, however, a site of great antiquity. Part of it has been washed away by the river, but heaps of brick and other traces of ruin still extend over a large area, and I found lying about in the streets several fragments of stone sculpture of early date. These I brought away with me to Bulandshahr, as also a once fine but now terribly mutilated round pillar, which I dug up on the very verge of the high cliff overlooking the river. This is specially noticeable as having its base encircled with a coil of serpents, which would seem to corroborate the connection of the local name with the word *ahi*, 'a snake.' The principal residents of the town are Nágar Bráhmans by descent, though—since the time of Aurangzeb—Muhammadans by religion, who believe that their ancestors were the priests employed by Janamejaya to conduct his sacrifice, and that in return for their services they had a grant of the township and the surrounding villages. Immediately after this event it is said that the Páṇḍavas transferred their seat of local government from Abár to Baran, and it may be that they then first attached the prefix *ahi* to the name of the town—so making it Ahibaran—in order to commemorate the circumstances of the migration. This would imply that the town was already in existence; and it might with much plausibility be identified with the Varanávata,* mentioned in the 143rd chapter of the first Book of the Mahábhárat.

All this, however, is conjectural and refers to a period so remote, nearly 1400 years before Christ, that no tangible record of it could be expected to survive to the present day. To come down to somewhat later times: the Bactrian dynasty, which flourished in the centuries immediately preceding our era, and the Gupta dynasty that succeeded it, have both left traces behind them. In the rains, copper and gold coins with Greek and Páli inscriptions, used so frequently to be washed down in the debris from the high ground of the old town, at a particular point, now called 'the Manihárs' or bangle-makers' quarter,' that after any heavy storm people made it a regular business to search for them. To prevent further cutting away, the slope was built up with masonry in 1876; but even since then two copper coins of Su-Hermæus, styled Basileus Soter, a gold coin of Chandra Gupta II, and another of an intermediate dynasty, have been picked up, which I presented to the coin cabinet of the Asiatic Society of Bengal.

* General Cunningham proposes to identify with the Varanávata of the Mahábhárata a village, now called Barnáwa, in the Merath district. It has not yet been explored, and it is therefore uncertain whether it is really an ancient site or not.

It may thus be concluded that the town of Baran at the commencement of the Christian era was a place of some wealth and importance; while the discovery of the antiquities above described clearly establishes the interesting fact that a little later, from about 400 to 800 A. D., there was a Buddhist community outside the Fort walls, occupying the site now known as the Moti Bágh. The only ancient inscriptions that have been found in the district are distinctly Brahmanical. The oldest is dated in the reign of Skanda Gupta, in the year 146, which—if the Saka era is intended—would correspond with 224 A. D. But this dynasty had an era of its own, which seems more likely to have been the one used, and an element of considerable uncertainty is thus introduced. For the commencement of the Gupta era is a very *vexata quæstio* among archæologists, being put by some so late as 319 A. D., by others at 190, and now by Gen. Cunningham at 167. A complete transcript and translation of the inscription, by Dr. Rájendralála Mitra, C. I. E. are given in Vol. XLIII of this Journal. It is not in itself of great importance, being simply a provision on the part of a Bráhman, named Deva-vishṇu, for the maintenance of an oil lamp, to burn in a temple of the Sun at Indra-pura. The copper-plate on which it is engraved was dug up at Indor, an artificial mound of great elevation and extent, a little off the high road from Anúpshahr to Aligarh, opposite the eighth mile-stone from the former town. As I have shewn at length in my "Mathurá," by an application of the rules laid down by the Prákrit grammarian Vararuchi, the Sanskrit Indra-pura, in the natural course of phonetic decay, must become Indor in the modern vernacular.

The next inscribed memorial is some centuries later in date, but from exposure to rough usage is in a far less perfect state of preservation and is for the most part illegible. It is an oblong block of stone, measuring 29 inches by 10 by 10, which I brought into the station from a well adjoining the tomb of Khwája Lál Barani, which lies across the Kálindi, about half a mile to the east of the town of Bulandshahr. There are two inscriptions, one opposite the other, in characters of different size, but of the same period, probably about 1200 A. D. Both are records of grants for religious purposes, and the stone must have been intended for deposit among the archives of the temple for which the endowments were provided. But it can never have been actually set up, as it is difficult to imagine a position in which both sides could be conveniently read; it is also evident that preparations had been made for splitting it up into two separate slabs of equal thickness. One of the two inscriptions opens with an invocation of Krishna, in the words *Oṃ Namo Bhagavate Vásudeváya.* The stone has been sent to Dr. Mitra for inspection, and eventually for deposit in the Indian Museum.

Of far greater significance is a copper-plate inscription, which was dug up in 1867 at the village of Mánpur, in the Agota Pargana, about eight miles to the north of the town of Bulandshahr. Natives, even of the higher and more educated classes, have a childish notion, of which it is quite impossible to disabuse them, that these old copper-plate inscriptions always refer to some buried treasure. Thus the Council of the Mahárája of Jaypur, on hearing of the Mánpur find, at once put in a claim for anything of value that might be discovered; on the plea that Mánpur had been founded by Rája Mán Siñh of the Jaypur line. The absurdity of the claim was in this case enhanced by the confusion of chronological ideas; for Mán Siñh was a contemporary of Akbar's, while the plate is anterior to the reign of Prithi Ráj. It was sent to the Asiatic Society in Calcutta, and a translation of it into Nágari and English by Pandit Pratápa Chandra Ghosh, appeared in Vol. XXXVIII of this Journal. By a strange fatality, the three most important words in the whole record, *viz.*, those which give the name of the reigning family, the name of the country, and the century of the date, are the most doubtful and illegible. The year—which is written at full length, in words—ends with 'thirty-three,' but the initial letters have been obliterated by rust. The century, however, must be either the eleventh or twelfth, for the characters belong to the period immediately succeeding that of the Kutila inscriptions. The date may thus be confidently accepted as either 1133 or 1233 *Samvat*, *i. e.*, either 1076 or 1176 of the Christian era. The earlier of the two seems the more probable.

The grant—which confers a village named Gandavá on a certain Gaur Bráhman—was made by a Rája Ananga, in whose description a word occurs which the Calcutta Pandit first took to be 'Kalinga.' But the only country so-called is an extensive tract far away on the sea-coast, south of Bengal. It was never owned by a single sovereign—which in itself creates a difficulty—and it is further inconceivable how a plate relating to so distant a region could have found its way into the Doáb. The word is very indistinct and ambiguous and (as the Pandit has remarked) may with equal probability be read *kanishṭha*, which will also give an intelligible sense to the passage. The suggestion of 'Kalinga' seems therefore to have been an unnecessary importation of a somewhat gratuitous difficulty. It might perhaps be *Kolánsa*. This is given in Monier Williams's Dictionary as the name of a district, placed by some in Gangetic Hindustán, with Kanauj for its capital, but which it would seem more natural to identify with the country round about Kol, the modern Aligarh.

The name of the family was read by the Pandit as 'Rodra'; but only with great hesitation, and with the admission that it seemed to be something different, though he could not exactly say what. It is really

Ḍoṛ, the name of an almost extinct Rájput tribe, who once were very notable people in these parts, though a Sanskrit scholar in Bengal may well be pardoned for not remembering them. They claim to be a branch of the great Pramár clan, which in ancient times was the most powerful of all the Rájput tribes; "The world is the Pramár's" being quoted by Col. Tod as a proverbial saying to illustrate their extensive sway. They represent their ancestor to have been a Pramár Rája of Mainpuri, who cut off his own head for a sacrifice to the divinity; whence his descendants were styled Ḍuṇḍ, 'the headless', afterwards corrupted into Ḍoṛ. But this is obviously a mere etymological fable. Chand in the Prithiráj-Rásá celebrates a Ḍoṛ chief of Kasondi, a locality which cannot now be identified with certainty, though probably it was a place that still bears the same name near Ajmir. The Ḍoṛs are also mentioned in a Sanskrit inscription of the time of Prithiráj, which was found by Colonel Skinner at Hánsi. This forms the basis for a rhapsody by Col. Tod in his usual enthusiastic vein, which is published in Vol. I of the Transactions of the Royal Asiatic Society. In the body of the article the tablet is described as commemorating a victory obtained over the Ḍoṛs; but what purports to be a more or less literal summary of the inscription is given at the end of the narrative, and all that can be gathered from this is, that in the course of the concluding stanzas the Ḍoṛs are mentioned, but in what character, whether as foes or allies, does not appear. The summary unfortunately is most inadequate; but the main object of the inscription would seem to have been to record the date not of any victory, but of the extension of a fort at Ási, which presumably was the older name of Hánsi. This work is said to have been executed by a General named Hammíra in conjunction with the Gahlot chief Kilhana, who is described—in Tod's translation—as Prithiráj's maternal uncle. But here lies a difficulty; for Prithiráj's mother was Kamala-Devi, one of the daughters of King Anangpál, who was a Tomar not a Gahlot, and who had no male issue. The date of this Hánsi inscription is *Sambat* 1224 (1168 A. D.). It was found in 1818 and presented to Lord Hastings; but in 1824, the date of Tod's article, it was not known what had become of it. In fact, a singular fatality seems to attend all the records of this ancient Hindu clan—once so considerable, now virtually extinct—for I find, on enquiry in Calcutta, that the Mánpur inscription also has disappeared and cannot be traced.

This grant enumerates fourteen successive Rájas, beginning with Chandraka, the founder of the particular family. The seventh in descent was Haradatta, who was succeeded first by his brother, secondly by a nephew, and only in the third place by his son, who was subsequently deposed by a Bráhman minister, who both secured the throne for himself and bequeathed it to his son. The parentage of the thirteenth Rája is not

distinctly stated, as it is in every other case, and hence it may be surmised that he was not related to his immediate predecessor, but belonged to the original Ḍoṛ stock. This is the more probable, because if he and his son Ananga had been descendants of the Bráhman usurper, the introduction of the Ḍoṛ pedigree would be altogether out of place.

The names stand as follows:

1. Chandraka.
2. Dharaṇi-varáha.
3. Prabhása.
4. Bhairava.
5. Rudra
6. Govinda-rája (surnamed Yasopara).

7. Hara-datta. — 8. Bhogáditya — 9. Srikuláditya.
10. Vikramáditya.
11. Bhúpati, surnamed Padmáditya, Bráhman Minister.
12. Bhojadeva.
13. Sahajáditya.
14. Ananga.

The above genealogy is of very exceptional interest, because it is known from other sources that at the time of the invasion of India by Mahmúd of Ghazni in 1017 A. D., Merath, Baran and Kol were all held by the Ḍoṛs and that Hara-datta was the name of their Rája, who had his principal residence at Baran. Unable to meet the Muhammadans in the field, he saved his towns from pillage by a nominal submission to the faith of Islám—as is stated in the Táríkh-i-Yamíni of Al Utbi, Mahmúd's Chronographer—and by the tender of a heavy ransom in treasure and elephants. The disgrace that he thus incurred may very probably be the explanation of the fact briefly stated in the Mánpur inscription that his son was twice passed over in the succession to the throne and was eventually deposed.

Before these events there is reason to conclude that Hara-datta was the most important chief in all this part of the country between Kanauj and Thanesar. For Delhi, though refounded by the Rája Dháva of the Iron Pillar about 319 A. D. and again rebuilt in 731 by Anang Pál, the first Tomar Rája of that name, is not once mentioned either by the Chinese Pilgrims or by Al Utbi, and was probably at this period a small, unfortified and quite unimportant village, the capital of the Tomars being at Kanauj.

When that city was taken by Chandra Deva, the founder of the Rahtor dynasty, about 1050 A. D., Anang Pal II retired to Delhi and there established himself. But at the beginning of the eleventh century, Hara-datta, the Rája of Baran, though nominally a feudatory of Kanauj, appears to have been the virtual sovereign of all the country now included in the districts of Aligarh, Bulandshahr, Merath and Delhi, with parts of Murádabád, Mathurá and Eta.

His name is still perpetuated by Hápur, a corruption of Hara-pur, now the head-quarters of the Stud Depôt, of which town he is the traditional founder, and all the fragments of stone sculpture that have been discovered at Bulandshahr may be assigned to his time. As might have been expected from its nearness to Delhi, the Muhammadans have made a clean sweep of the district and razed to the ground every building, secular or religious, that had been erected by its former Hindu rulers. I have been over every part of it, but the sum total of all the antiquities I have been able to collect may be very briefly enumerated. An unusually lofty column is one of a pair that were dug up in some low ground at the entrance to the town from the Chola Railway Station. Though long since brought under cultivation, the field is still called 'the Sarovar,' and is the traditional site of a large masonry tank which Hara-datta is said to have constructed. The companion column is at Mirath, where it was sent by the Sardár Bahádur, into whose hands it had come, and has been worked up into a house he has built there. The one now in my possession I rescued from his stables, where it had been thrown on the ground and was used by his grass-cutters to sharpen their tools on. Six short pillars of the same period were found buried under the steps of a small mosque on the highest part of the old town. In digging the foundations of a house on the opposite side of the same street I recovered a curious stone, sculptured with a representation of three miniature temples. These are of such different design that, if they had been found separately, I might have been inclined to refer them to different architectural epochs. But the excessively archaic type of one must be attributed to the influence of religious conservatism; similar forms may be seen in conjunction on the front of the temples of Khajuráho, which are known to be of the tenth century A. D. A circular pillar, with a coil of human-headed snakes at the base, is, as already mentioned, from Ahár, as also a mediæval door-jamb and a block carved with rows of temple façades in the style of the Násik caves. This last is probably the oldest of the group. Another door-jamb, found in the court-yard of the mosque at Bulandshahr, is comparatively modern.

The Sarovar, or Tank, field, of which I have spoken above, is bounded on the north by an extensive mound, on which now stands the stable for

Government stallions, and in levelling part of it I came upon two curious terra cotta figures, (Plate XXII, fig. 1,) both alike, 5¼ inches high, representing a woman with a parrot, which she is about to feed with a fruit she holds in one hand. She has enormous ornaments in her ears and a variety of chains and bracelets about her. Another fragment—a head only—shows a chignon of most prodigious dimensions. In the absence of stone, the potter's art seems to have been largely developed for decoration and religious purposes, as is further indicated by a clay statue of the four-armed Krishna, which I discovered in breaking down an old well in the upper town. The exact date of these figures cannot be determined.

The Mánpur inscription gives Vikram-áditya as the name of Haradatta's son, and he is probably the same person as a Rája Vikram Sen of Baran, who figures in an Aligarh pedigree. The capital of that branch of the Ḍoṛ family is said to have been transferred from Jaláli to Kol by Buddh Sen, who was the son of Bijay Rám (brother of Dasarath Siñh, who built the fort at Jalesar) the son of Náhar Siñh, (founder of the Sambhal Fort) the son of Gobind Siñh, who was the son of Mukund Sen, the son of Rája Vikram Sen of Baran. Mangal Sen, who succeeded his father, the above-mentioned Buddh Sen, at Kol, is said to have given his daughter Padmávati in marriage to the heir of Rája Bhím of Mahrára and Etáwa, who soon after his accession was murdered by his younger brothers. The widow then returned to Kol, where her father built for her the tower, which was wantonly destroyed by the local authorities in 1860. It is, however, more commonly believed that the tower was erected by the Muhammadans in 1274 on the site of the principal Hindu temple, to commemorate the final reduction of the town in the reign of Násir-ud-dín Mahmúd. Possibly it had been built by the Rája and was only enlarged or otherwise altered by the conquerors.

Eighty years before the fall of Kol, *viz.*, in 1193, the Ḍoṛ line of Rájas at Baran had come to an end in the person of Chandra Sen, who was killed while defending his fort against the army of Shaháb-ud-dín Muhammad Ghori. Before he fell, an arrow from his bow had slain one of the leaders of the invading force, a certain Khwája Lál Ali, whose tomb across the Kálindi is still reverenced as that of a martyr. The gate was opened to the enemy by two traitors, one a Bráhman named Híra Siñh, the other Ajaypál, himself a Ḍoṛ, who probably hoped by this act of perfidy to secure recognition as the future head of the family and the most fitting person to continue its hereditary honours. All, however, that he actually obtained from the conqueror was the subordinate post of Chaudhari, with the sonorous title of Malik Muhammad Daráz Kadd; the latter being the reward for his profession of Islám; while the administration of the new province was conferred upon a fellow-countryman of the victorious General, Kázi

Núr-ud-dín of Ghazni. The descendants of this, the first Muhammadan Governor of Baran, still occupy a respectable position in the town and retain their ancestor's title of Kázi. Similarly, Ajaypál's descendants still style themselves Chaudharis; though the name by which they are more commonly designated is Tánṭas, or Mischief-makers. These unworthy representatives of a long line of independent princes form a fairly numerous section of the community but are badly off and of ill-reputation. They are one and all Muhammadans. During the raid of the Sikhs in 1780 they opened the gate of the town to them, in imitation of their recreant forefather; and again in the Mutiny of 1857 they were the first to plunder the bazar. The social distinction of the old family has been better transmitted in the female line by a daughter of the house, who was given in marriage to the Bargújar chief Prataáp Siñh, who came up from Rajaur, now in the Jaypur State, to join Prithi Ráj of Delhi in his attack on Mahoba. After the conquest he returned no more to his own country, but settled down at Pahásu, where he is now represented by his direct descendant Nawáb Sir Faiz Ali Khán, K. C. S. I.

To sum up the Hindu Annals of Baran. It was founded about a thousand years before Christ by Tomar chiefs from Delhi: under the Indo-Scythian and Gupta dynasties, at the commencement of our era, it was a place of some wealth and importance; and for a considerable period, up to the ninth or tenth century it included in its population a community of Buddhists. About the year 800 A. D. the Ḍoṛ Rájputs rose to power, and their leader Chandraka, having established himself as a Rája, made Baran his capital. His descendant in the sixth degree, Hara-datta, founded the town of Hápur and ruled an extensive tract of country including Mirath and Kol; but, in 1017, being hard-pressed by Mahmúd's invading force, he submitted to terms, which lost him the confidence of his people. On the withdrawal of the conqueror, domestic disturbances ensued, but—after a temporary usurpation—the old dynasty was eventually restored and occupied the throne till the year 1193, when Rája Chandra Sen, the last of the line, was defeated and killed by the army of Kutb-ud-dín, and the Fort then passed into the hands of the Muhammadans.

Under the new administration it would seem to have been still considered a place of military importance. On the accession of Kai Kubád in 1286 A. D. Malik Tuzáki, a man of high rank and importance in Balban's reign and Muster-master General (*A'riz-i-mamálik*) held the fief of Baran, and after he had been got rid of by the favourite Nizám-ud-dín, his appointments were conferred upon Jálal-ud-dín, who in 1290 became Emperor. His murderer and successor Alá-ud-dín, also made it for some days his head-quarters before he marched upon Delhi, and it was here that he received the submission of all the principal nobles, whom he bought over from

the cause of the rightful heir by a lavish distribution of the treasure that he had captured at Deogiri; the leaders receiving twenty, thirty, and some even fifty *mans* of gold, and all their soldiers 300 *tankas* each.* He is described as holding his levy in the open space before the town mosque. The present Jama Masjid was not built till 440 years later, but an earlier structure probably preceded it on the same site. This is on the verge of the hill, but in front of the main gate there is an area of considerable extent, which is fairly level, though now completely covered by a labyrinth of narrow lanes, with mud hovels reaching up to the very walls of the Mosque enclosure and even built on to the staircase, which is its only approach. As the claim for compensation cannot involve any very large outlay, I now propose to pull down some of these miserable tenements, and again open out a small square in front of what is the principal religious building in the place. That such encroachments should have been allowed, or rather committed by the Muhammadan guardians of the Mosque is an illustration of the carelessness with which the citizens of an Indian town ordinarily administer their own public institutions.

The new Governor, Mayid-ul-Mulk, whom Alá-ud-dín put in charge of Baran,—though of no celebrity himself—is noteworthy as the father of the only distinguished literary character that the town has produced. This was Zia-ud-dín, called Barani from the place of his birth, who wrote the history entitled 'the Chronicles of Firoz Sháh.' It is brought down to the year 1356, at which time the author was 74 years of age. His grave, according to local tradition, is at the spot called the Kálá Ám—from an old mangoe tree that once stood there—at the junction of the six roads near the District Courts. Every Thursday evening a cloth is spread over it and lamps are lit at its head, but there is no monument nor inscription. Indeed, it is asserted by some authorities that he was not buried at Bulandshahr at all, but at Delhi, in the Nizám-ud-dín cemetery, near his friend, the poet Amir Khusro, who died in 1325. Prof. Blochmann, a thoroughly competent critic, speaks of him as a most miserable writer, so far as style is concerned; his language being Hindi literally translated into Persian. As regards matter, however, which in an historical authority is the point of most importance, he is by no means devoid of merit. Despite his literary defects, Prof. Dowson describes him as a vigorous, plain-spoken writer, who may unhesitatingly be indicated as the one most acceptable to a general reader, and whose pages may be read without that feeling of weariness and oppression which the writings of his fellows too commonly produce. His work was intended as a con-

* The *tanka* is the name for the current coinage of the time, the exact value of which is uncertain. Fifty *mans* of gold would be more than 35 cwt.!

tinuation of the Tabakát-i-Násiri of Minháj-ud-dín Jurjáni. It contains the history of eight kings, Balban, Kai-Kubád, the three Khiljis, the two Tughlaks and Firoz Sháh. The history of the last reign, though the one which gives its title to the book, is incomplete and of less interest than the other portions, the value of the narrative being affected by a strain of excessive adulation. He is said to have died in such poverty that even a proper shroud could not be provided for his body, which had to be wrapt up in a piece of coarse matting. But the truth of this tradition may be questioned ; the continuer of his history expressly states that his death was greatly regretted by the Emperor, and both his father and uncle had occupied important positions at Court, the latter, Ala-ul-Mulk having been the Kotwal, or Police Magistrate, of Delhi.

In the reign of Firoz's predecessor, Muhammad Tughlak, (1325 to 1351 A. D.) the town of Baran suffered dearly for its proximity to Delhi, being one of the first places where that sanguinary tyrant diverted himself with his favourite spectacle of an unprovoked massacre. In the great famine of 1344, after the removal of the Capital to Deogiri, the country of the Doáb—to use the language of the local historian—"was brought to great distress by heavy taxation and numerous cesses. The Hindus burnt their corn-stacks and turned their cattle out to roam at large. Under the orders of the Sultán the Collectors and Magistrates laid waste the country, killing some of the land-owners and village chiefs and blinding others. Such of the unhappy inhabitants as escaped formed themselves into bands and took refuge in the jungles. So the country was ruined. The Sultán then proceeded on a hunting excursion to Baran, where—under his directions—the whole of that neighbourhood was plundered and laid waste and the heads of the Hindus were brought in and hung upon the ramparts of the Baran Fort." Though it was a matter of impossibility to collect the revenue, the Hindu Governor was put to death for his failure to do so, and a vast number of his kinsmen, a Baniya clan called Baran-wálas, whose ancestors had been settled in the town by its first founders, were driven into exile. Some of them emigrated to Murádabád, while others fled as far as Azamgarh and Gházipur, in both which districts they are now more numerously represented than in their original home.

Of those who remained at Baran, one family in the reign of Akbar acquired for themselves the post of hereditary Kánungo ; and one of their descendants, Shaikh Roshan, who was converted to Islám by the persuasive arguments of Aurangzeb, founded the suburb—as it then was—called Shaikh Saráe, which now by the increase of population has become a very central locality. Of the same stock are Munshi Shaháb-ud-dín, the builder of the large mosque, which from its lofty situation is the most con-

spicuous feature in any general view of the town, and the late Masúm Ali Khán of Murádabád, whose son Munawar Ali Khán, being of weak intellect, is under the charge of the Court of Wards. The handsome range of shops in the market-place, built in 1882, is part of his estate.

Of the Baranwálas, who adhered to the old faith, the most conspicuous person in the present century was Sítal Dás, who about the year 1830 built that portion of lower Bulandshahr which is known as Sítal Ganj, and is now the property of his son Prem-sukh Dás.

In spite of the massacre and famine and wholesale expulsion of the inhabitants that took place in 1344, Zia-ud-dín relates that his native town rapidly revived under the more benign sway of Firoz Sháh. At some time during his reign, which lasted from 1351 to 1388, that Emperor founded Khurja, which has become the largest commercial mart in the neighbourhood; a part of it is still called Firoz Ganj. More than a century later, Sikandar Lodi, about the year 1500, founded what are now the two considerable towns of Sikandarabád and Shikárpur, at which latter place—as the name indicates—he had a small hunting-box for occasional residence. The only two other towns of any size in the district, Anúpshahr and Jahángirabád, were founded later still, in the reign of Jahángir; which shows, how essentially modern the present centres of population are, excepting only Bulandshahr itself and Dibhái: the latter is occasionally mentioned by the early Muhammadan historians as a muster-place for troops.

The prosperity which the country had enjoyed during the long and settled reign of Firoz was followed by a series of fratricidal struggles between his sons and grandsons for the possession of the throne, and then by the ruin and rapine of foreign invasion. On the capture of Delhi by the Mughals in 1398, the puppet Emperor Mahmúd fled away to Gujarát, while the Regent, Ikbál Khán, took refuge in the fort of Baran. Timúr soon returned home with his plunder to Samarkand, and on his departure Nusrat Sháh—also one of Firoz's grandsons—marched up from Merath and re-occupied the ruins of the capital, whence he sent a large force "under Shaháb Khán to Baran to overpower Ikbál.* On the way, a band of Hindu foot-soldiers fell upon him in the night and killed him and dispersed his followers. As soon as Ikbál heard of this, and that the elephants also had been abandoned, he hastened to the spot and secured them. From that time his power and renown increased daily, and forces gathered round him, while Nusrat Khán grew weaker and weaker, so that after a stay of ten months he was able to leave Baran and recover possession of Delhi." He also got into his hands the person of the Sultán Mahmúd, whom he afterwards took to Kanauj and left there, while he himself

* Táríkh i Mubárak Sháh of Yahya bin Ahmad.

reigned as the real sovereign of the country, till 1405, when he fell in battle at Multán.

Two years later, *viz.*, in 1407, Ibráhim Sháh, the king of Jaunpur, marched up against Delhi, where Mahmúd was then enthroned; but hearing of disturbances at home he hastened back, leaving Marhaba Khán, a protegé of Ikbál's, with a small force, at Baran. After six months Mahmúd marched from Delhi against Baran, and Marhaba Khán came out to meet him; but in the battle that ensued he was beaten and driven back into the fort, where the Imperial troops followed and killed him.

The next mention of Baran is in 1421, during the reign of Khizr Khán, the first of the Saiyid dynasty, when the Vazír, Táj-ul-Mulk, marched through it on his way to suppress a rebellion in Kol and Etáwa. Again, in 1434, after the assassination of Khizr's successor, Mubárak Sháh, an army of the Hindu Vazír's, Sarwar-ul-Mulk, under the command of Kamál-ud-dín, proceeding against Allah Dád, the chief of the insurgents, halted at Baran, the half-way station between the Jamuná and the Ganges. Allah Dád withdrew to Ahár, where the two generals came to an understanding and turned their combined forces against the Vazír, whom they besieged in the fort of Delhi, where shortly afterwards he was slain in an attempt on the life of the Emperor Muhammad Sháh.

The earliest Persian inscription in Bulandshahr is a tablet let into the wall of the Íd-gáh, which records the construction of a mosque by Nek-bakht Khán, in the year 943 *Hijri* (1536 A. D.) in the reign of the Emperor Humáyun and during the governorship "of the chaste Báno Begam." The fact of a female Governor is somewhat curious. At Til Begampur, fifteen miles north-west of Bulandshahr, is a bathing-well (or *báoli*) with an inscription dated only two years later, *viz.*, 1538, in which the local Governor's name is given as Amír Fakír Ali Beg. As an Íd-gáh would not be styled a mosque, the stone must have been brought from elsewhere, but probably from the immediate neighbourhood. Fragments of an Arabic inscription in Cufic characters have also been inserted in the same wall at regular distances, to serve as decorative panels, and the later Persian inscription seems to have been utilized with simply the same object. The appearance of this building, with its blackened and crumbling masonry, is scarcely creditable to the Muhammadan community, who should take some steps to clean and repair it.

About 100 yards to the east of the Íd-gáh and the adjoining English cemetery, is a square-domed tomb of substantial brick masonry and some size, but no particular architectural merit, with a Persian inscription. This records its completion during the reign of the Emperor Akbar, in the year 1006 *Hijri* (1597 A. D.) as a monument to the memory of Miyán Bahlol Khán Bahádur. He belonged to the Bahlím clan of Shaikhs, and his

descendants continued in possession of an extensive tract of freehold land in the suburbs, till 1857, when they forfeited it by their complicity with the mutineers. One of the outlying hamlets, included in the straggling parish of Baran, still bears the name of Bahlímpura.

At the beginning of the seventeenth century, and probably for some years later, Baran continued to be the capital of a *dastúr*, or district, in the Home Sarkár, or Division, of the Delhi Súba, or Province. But the town must have rapidly sunk into insignificance, and eventually it became a dependency of Kol. It receives no further mention in any historical record after the Ain-i-Akbari, and the only event of even local interest, that forms a landmark in the later Muhammadan period, is the foundation of the Jama Masjid in 1730. This was built by Sábit Khán, who achieved special distinction as Governor of Kol. There he is commemorated by his restoration of the old Fort, which he called Sábit-garh; by a *dargáh*, bearing date 1707; and still more by the great mosque in the centre of the town, which he completed in 1728. His tomb is in the garden now known as Kinloch-ganj. The Bulandshahr mosque is of much less pretension and, being unfinished at the time of his death, remained so till more than a hundred years later. His lineal descendants at Aligarh, however poor their circumstances, and most of them are mere labourers, are distinguished by the personal title of Nawáb, in remembrance of their ancestor. In Bulandshahr his success as a proselytizer is evidenced by several families—originally Thákurs of the Bargújar clan—who were led by him to adopt Muhammadanism and who have ever since borne the name of Sábit-kháni.

Fifty years later, *viz.*, in 1780, Baran had its final fall, being then abandoned even by the Amil, or subordinate revenue official, who had hitherto made it his head-quarters. The spot that he selected in preference was on the opposite side of the river, some six miles to the north. The village had previously been known as Rathora; but the new Fort was placed by its founder, the Amil Hak-dád Khán, under the patronage of a saint, popularly styled Málamál, who had a shrine close by, and it received the name of Málagarh. In 1857 Hak-dád's grandson, Walidád Khán, put himself at the head of the revolt and proved a formidable opponent. He was connected with the royal family of Delhi—his sister's daughter having been married to one of the king's sons—and he had thus obtained from Muhammad Bahádur a formal grant appointing him Súbadar of this part of the Doáb. Málagarh became the resort of all the disaffected from far and near; his troops overran the whole neighbourhood, fought several sharp engagements, and for a few days occupied the town of Bulandshahr. On the 28th of September they were driven out, and their leader escaped across the Ganges. The demolition of his fort at Málagarh, which took

reigned as the real sovereign of the country, till 1405, when he fell in battle at Multán.

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The next mention of Baran is in 1421, during the reign of Khizr Khán, the first of the Saiyid dynasty, when the Vazír, Táj-ul-Mulk, marched through it on his way to suppress a rebellion in Kol and Etáwa. Again, in 1434, after the assassination of Khizr's successor, Mubárak Sháh, an army of the Hindu Vazír's, Sarwar-ul-Mulk, under the command of Kamál-ud-dín, proceeding against Allah Dád, the chief of the insurgents, halted at Baran, the half-way station between the Jamuná and the Ganges. Allah Dád withdrew to Ahár, where the two generals came to an understanding and turned their combined forces against the Vazír, whom they besieged in the fort of Delhi, where shortly afterwards he was slain in an attempt on the life of the Emperor Muhammad Sháh.

The earliest Persian inscription in Bulandshahr is a tablet let into the wall of the Íd-gáh, which records the construction of a mosque by Nek-bakht Khán, in the year 943 *Hijri* (1536 A. D.) in the reign of the Emperor Humáyun and during the governorship "of the chaste Báno Begam." The fact of a female Governor is somewhat curious. At Til Begampur, fifteen miles north-west of Bulandshahr, is a bathing-well (or *báoli*) with an inscription dated only two years later, *viz.*, 1538, in which the local Governor's name is given as Amír Fakír Ali Beg. As an Íd-gáh would not be styled a mosque, the stone must have been brought from elsewhere, but probably from the immediate neighbourhood. Fragments of an Arabic inscription in Cufic characters have also been inserted in the same wall at regular distances, to serve as decorative panels, and the later Persian inscription seems to have been utilized with simply the same object. The appearance of this building, with its blackened and crumbling masonry, is scarcely creditable to the Muhammadan community, who should take some steps to clean and repair it.

About 100 yards to the east of the Íd-gáh and the adjoining English cemetery, is a square-domed tomb of substantial brick masonry and some size, but no particular architectural merit, with a Persian inscription. This records its completion during the reign of the Emperor Akbar, in the year 1006 *Hijri* (1597 A. D.) as a monument to the memory of Miyán Bahlol Khán Bahádur. He belonged to the Bahlím clan of Shaikhs, and his

descendants continued in possession of an extensive tract of freehold land in the suburbs, till 1857, when they forfeited it by their complicity with the mutineers. One of the outlying hamlets, included in the straggling parish of Baran, still bears the name of Bahlímpura.

At the beginning of the seventeenth century, and probably for some years later, Baran continued to be the capital of a *dastúr*, or district, in the Home Sarkár, or Division, of the Delhi Súba, or Province. But the town must have rapidly sunk into insignificance, and eventually it became a dependency of Kol. It receives no further mention in any historical record after the Ain-i-Akbari, and the only event of even local interest, that forms a landmark in the later Muhammadan period, is the foundation of the Jama Masjid in 1730. This was built by Sábit Khán, who achieved special distinction as Governor of Kol. There he is commemorated by his restoration of the old Fort, which he called Sábit-garh; by a *dargáh*, bearing date 1707; and still more by the great mosque in the centre of the town, which he completed in 1728. His tomb is in the garden now known as Kinloch-ganj. The Bulandshahr mosque is of much less pretension and, being unfinished at the time of his death, remained so till more than a hundred years later. His lineal descendants at Aligarh, however poor their circumstances, and most of them are mere labourers, are distinguished by the personal title of Nawáb, in remembrance of their ancestor. In Bulandshahr his success as a proselytizer is evidenced by several families—originally Thákurs of the Bargújar clan—who were led by him to adopt Muhammadanism and who have ever since borne the name of Sábit-kháni.

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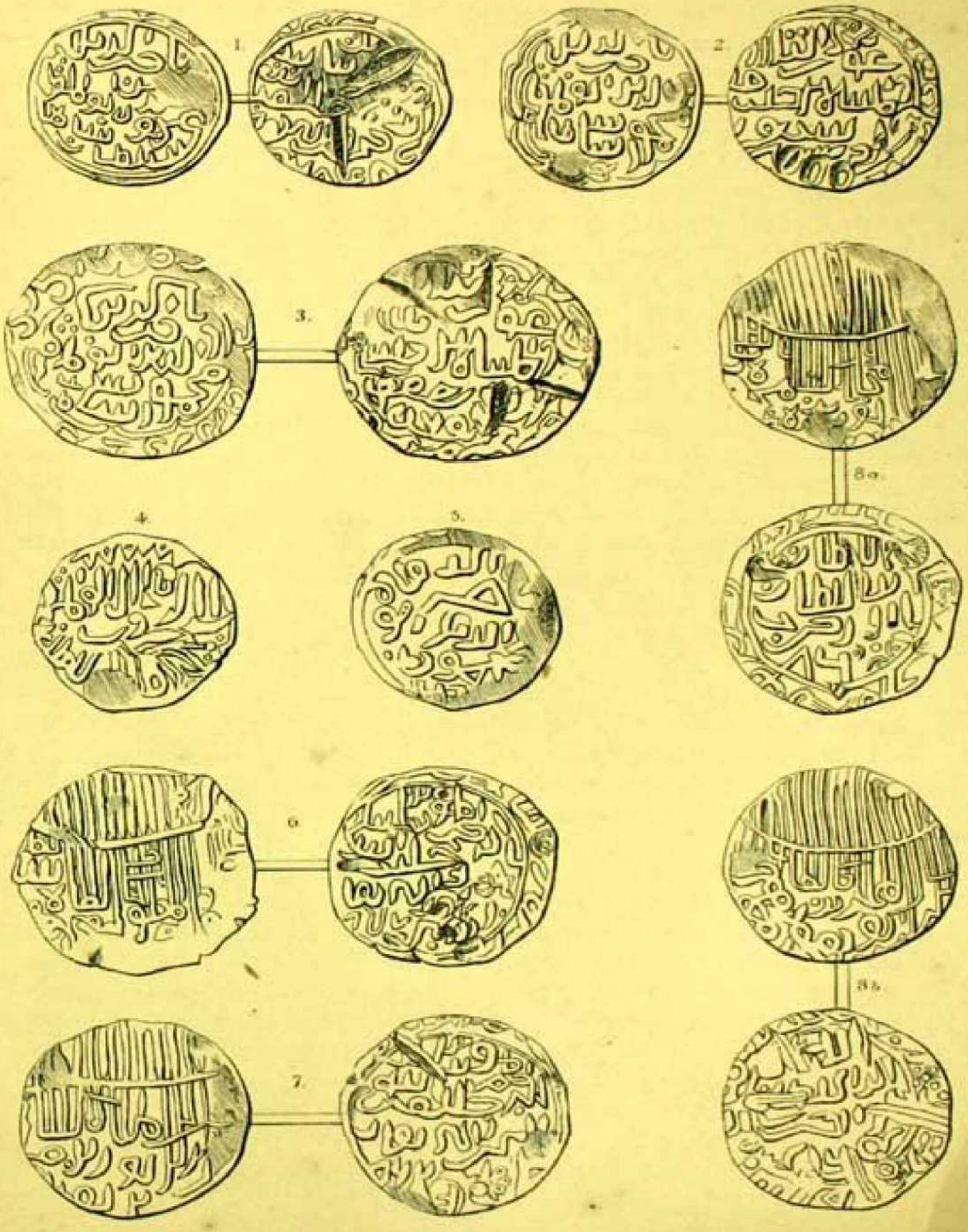
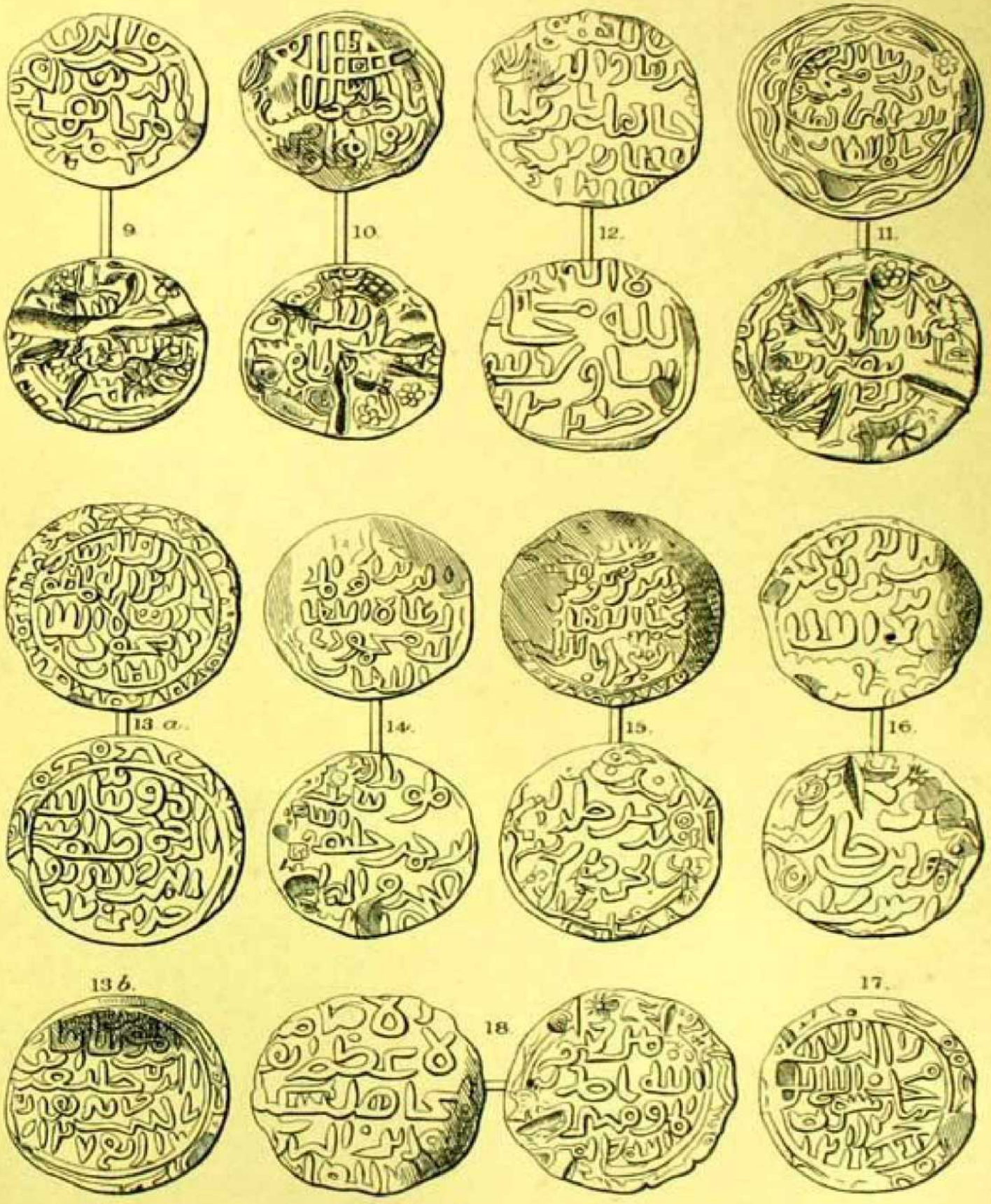
place a few days later, was accompanied by a deplorable accident. The officer who fired the mine was Lieut. Home of the Engineers, one of the heroes of the Kashmir Gate, and he was killed by the explosion. His body was interred in the Station Cemetery, where a handsome stone monument forms a conspicuous object and records the untimely death of the first V. C. in India.



Lith. & Printed by W. Newman & Co., Ld., Calcutta.

RUPEES OF MAHMUD SHAH I OF BENGAL.



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RUPEES OF BARBAK SHAH OF BENGAL.

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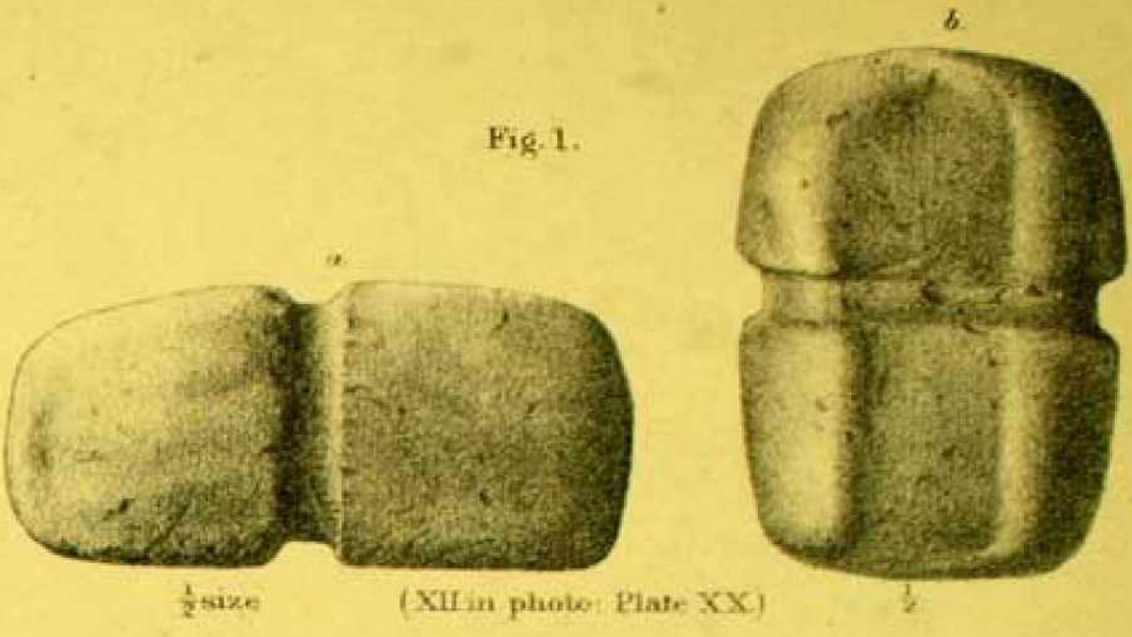
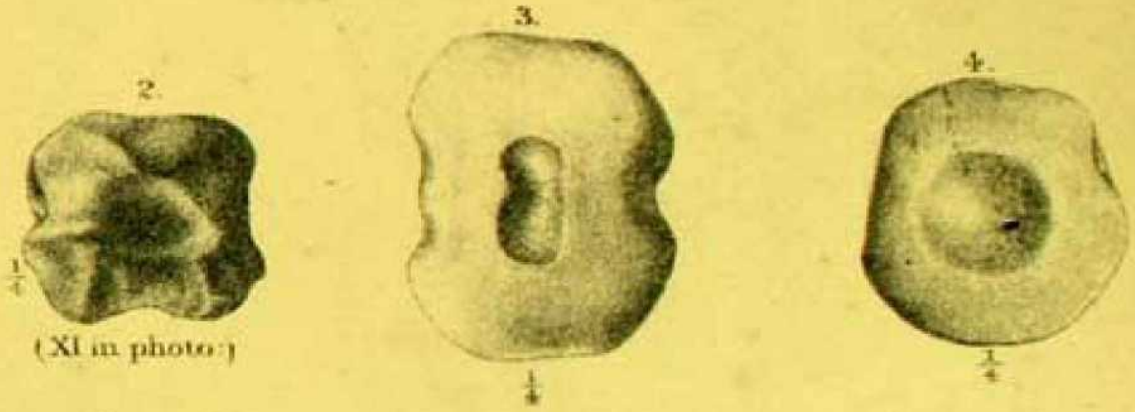
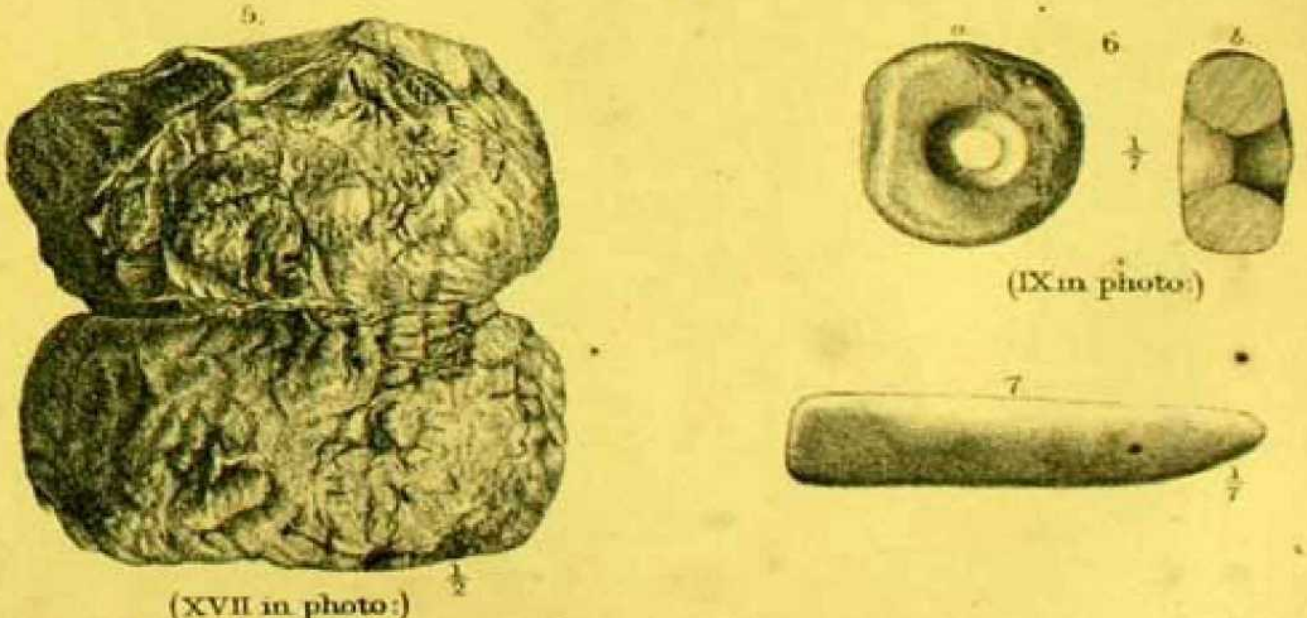
Fig. 1.



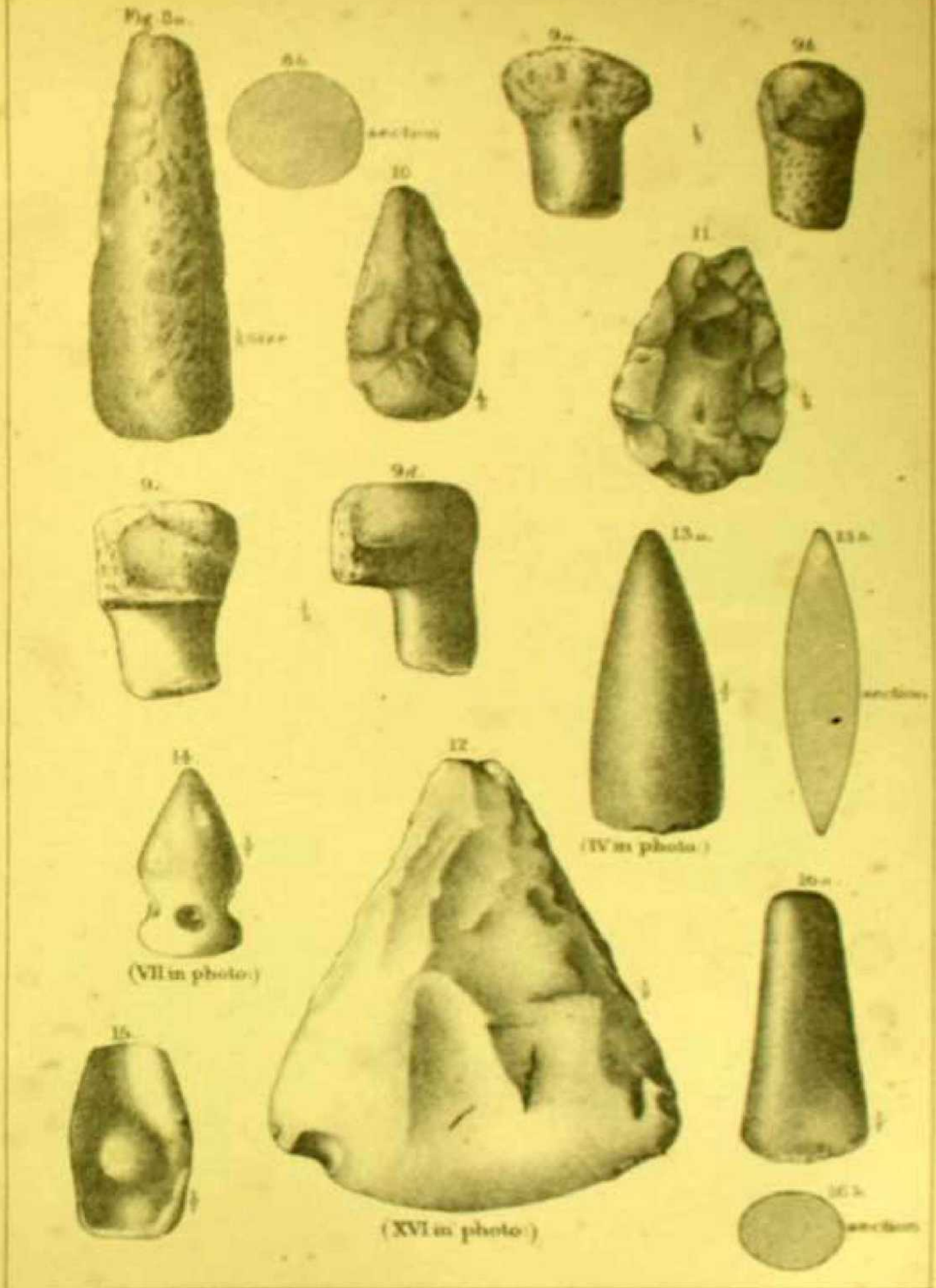




From a Photograph.

STONE IMPLEMENTS FROM THE N. W. PROVINCES OF INDIA.—J. H. RIVETT-CARNAC.

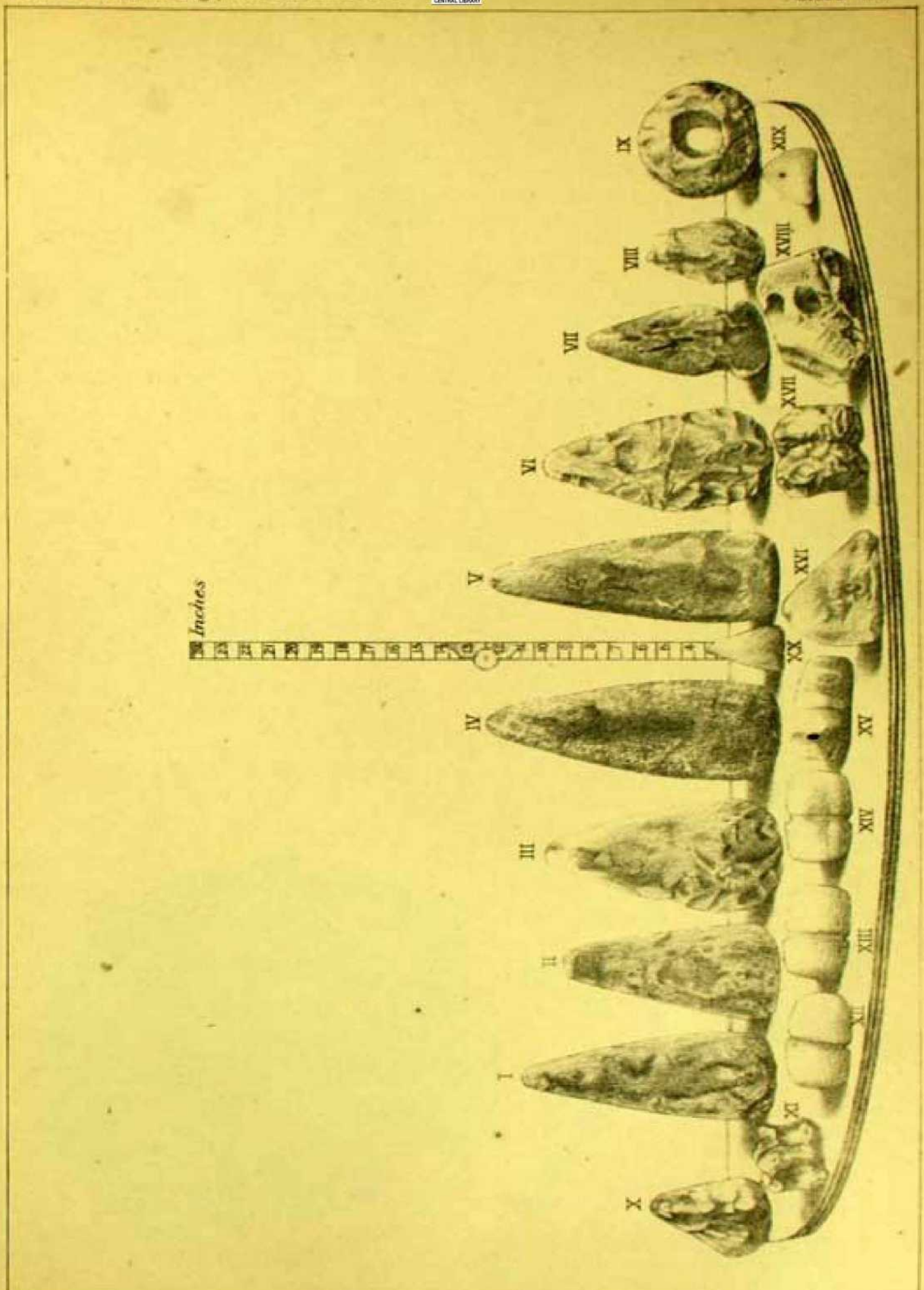
Lithographed at the Survey of India Offices, Calcutta, September 1883.



From a Photograph.

STONE IMPLEMENTS FROM THE N. W. PROVINCES OF INDIA.—J. H. SIVATT-CASSIAC.

Lithographed at the Survey of India Offices, Calcutta, September 1883.



From a Photograph.

STONE IMPLEMENTS FROM THE N. W. PROVINCES OF INDIA.—J. H. RIVETT-CARNAC.

(Specimens are all to scale. See measure in inches).

GOLD CYLINDER.

A.

Full Size _ 1520 Grains.

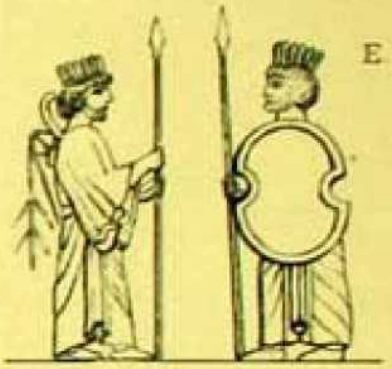
SYMBOLS OF ORMAZD.

B

C

From Persepolis.

D _ Persian Cylinder



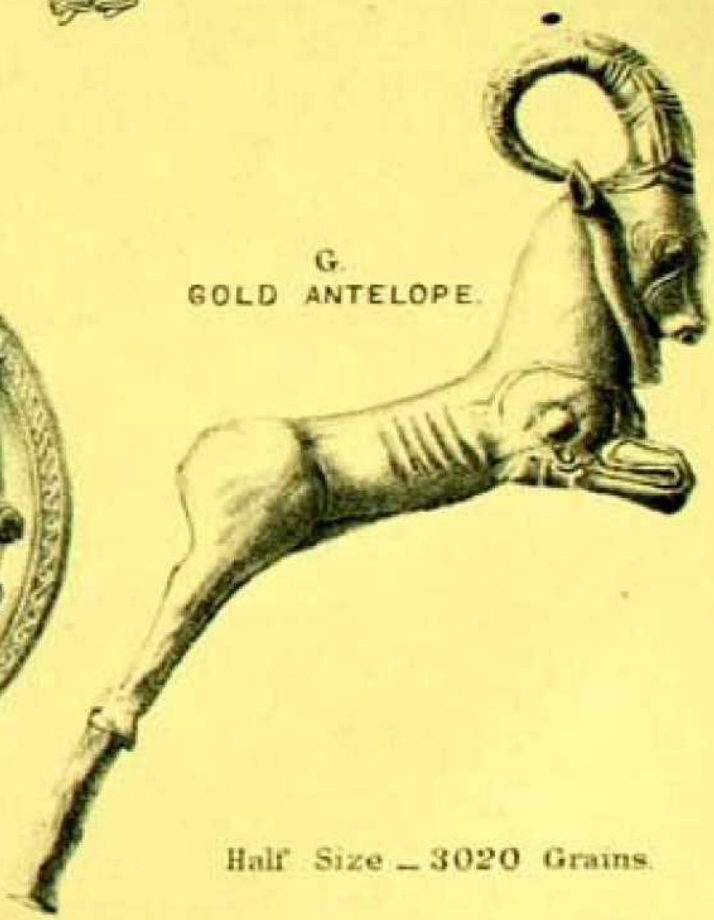
E.

F.

GOLD.

Half Size _ 1500 Grains.

G.
GOLD ANTELOPE.



Half Size _ 3020 Grains.

Lith. & Printed by W. Newman & Co., Ld., Calcutta.

RELICS FROM ANCIENT PERSIA.

Fig. 1.

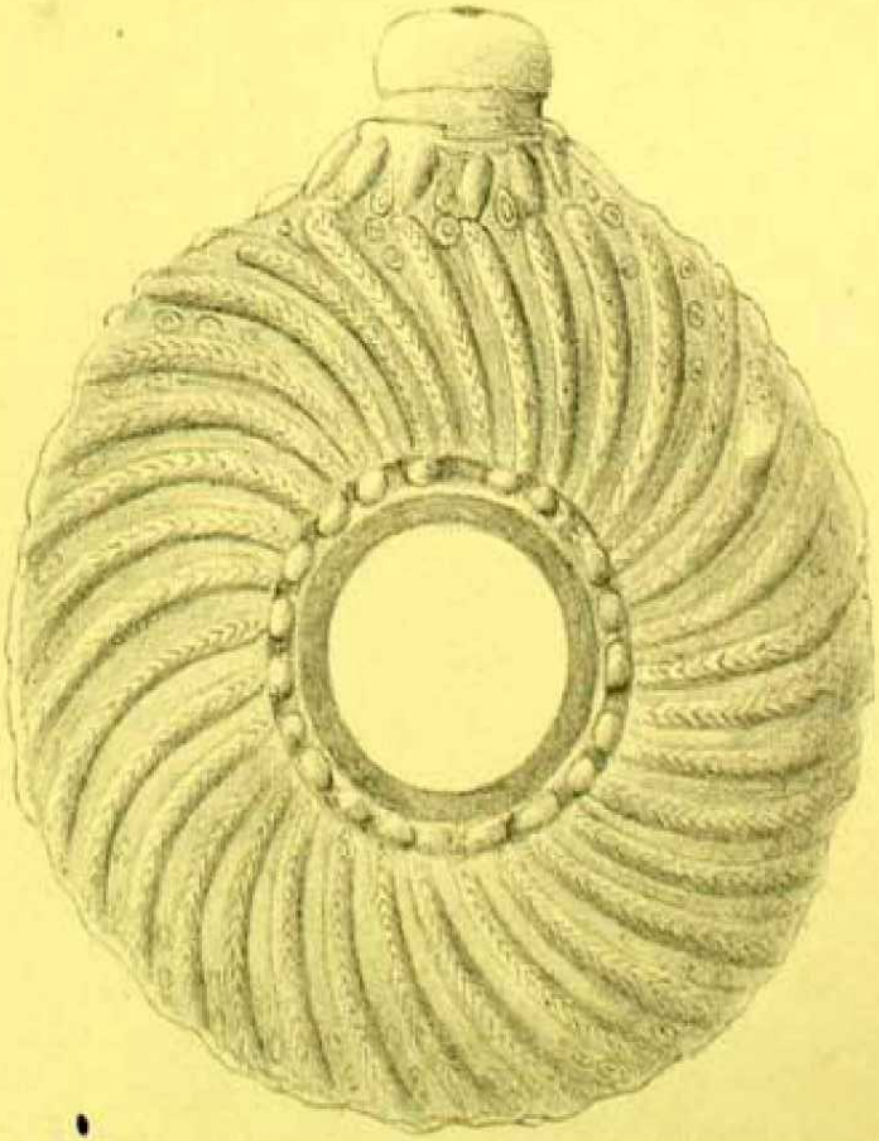


Fig. 2.

Kundan Lal del.

TERRA-COTTA ANTIQUITIES FROM BULANDSHAHAR

Lithod. and printed by W. Newman & Co. Ld.

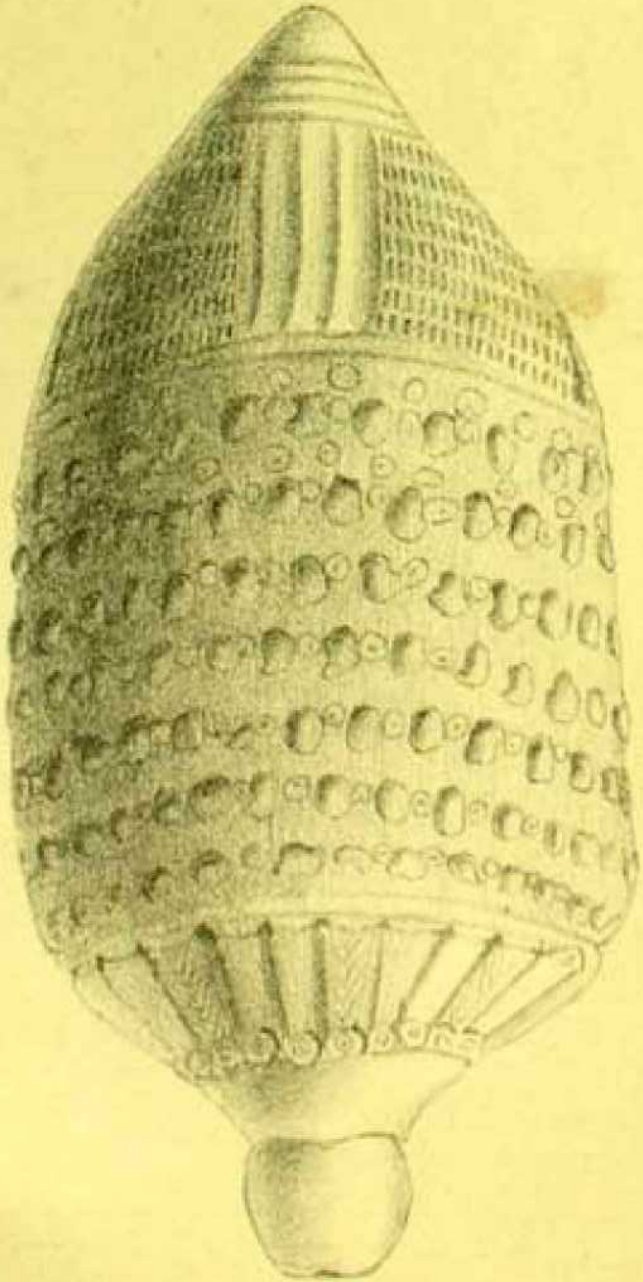


Fig. 3.

Fig. 3, a.

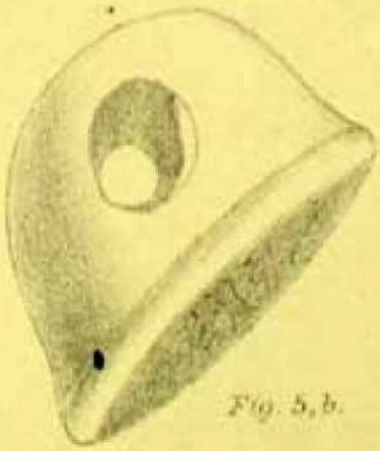


Fig. 3, b.

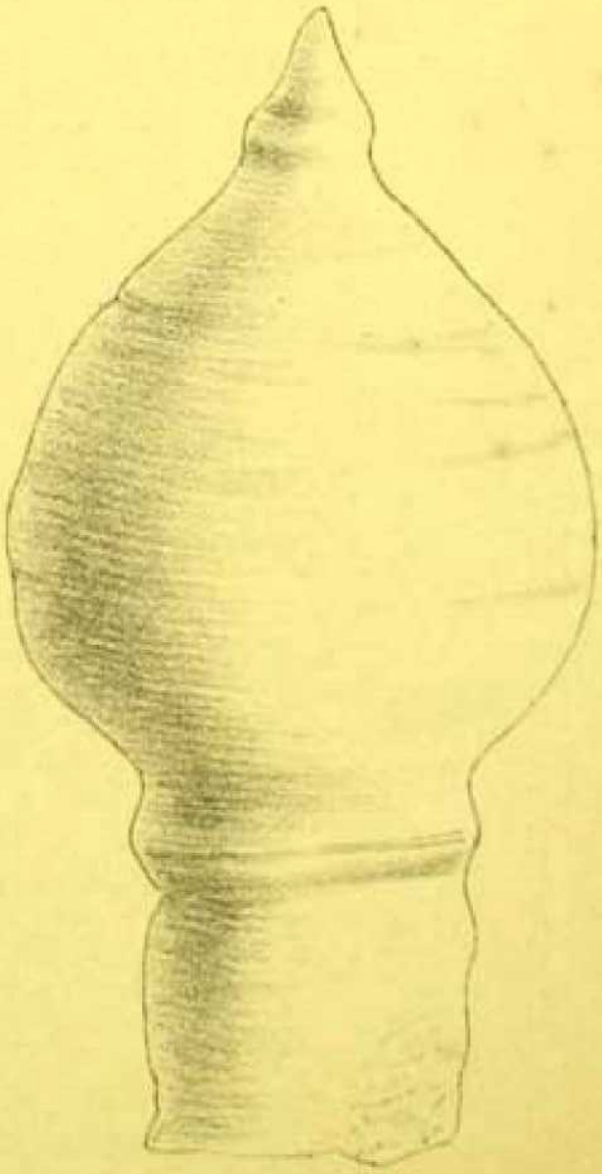


Fig. 4

Lithod. and printed by W. Newman & Co. Ltd.

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TERRA COTTA ANTIQUITIES FROM BULANDSHAHAR.

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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL.

Part II.—NATURAL SCIENCE.

No. I.—1883.

I.—*Description of a new Species of the Rhopalocerous Genus* Cyrestis *from the Great Nicobar.*—*By* LIONEL DE NICÉVILLE, ESQ.

[Received January 31st;—Read February 7th, 1883.]

(With part of Plate I.)

The very beautiful insect described below has been recently received by the Indian Museum, Calcutta, from Mr. A. de Roepstorff, who obtained it at the close of last year from the island of Great Nicobar. It is the first species of the genus *Cyrestis* that has been recorded from the Nicobar group of islands, though three species have been obtained by Mr. de Roepstorff from the neighbourhood of Port Blair in the South Andaman group, all of which belong to the pale section of the genus, while the species now described belongs to the tawny section. It is not unlikely that a "tawny" *Cyrestis* remains to be discovered in the Andamans, as in Sikkim and elsewhere species of both sections occur together; but it is to be remarked that the Andamans even now are exceptionably rich in species of *Cyrestis*. Upper Tenasserim is the only other locality where more than two species are met with as far as I am aware.

CYRESTIS TABULA, n. sp. Plate I, Fig. 1, ♂.

♂ UPPERSIDE. *Both wings* rich deep ochreous, with black markings; all the veins more or less defined with black. *Forewing* with a short longitudinal streak at the base of the cell; immediately beyond this a transverse one reaching from the median nervure to the costa; then a pair of streaks which are wide apart at the median nervure, but joined at the subcostal

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nervure; the disco-cellular nervules defined with a fine black line; beyond which is a bow-shaped figure composed of two lines joined at their ends, the outer line straight, the inner one curved, with their points resting on the second median nervule and subcostal nervure; below the cell a pair of streaks reaching the inner margin, the origin of the inner one being where the first median, and the outer one where the second median nervule is given off, the space between them being thickly irrorated with black scales, leaving but little of the ochreous ground-colour visible; two discal lines from the subcostal nervure to the inner margin, the outer one lunulate, the inner one sinuate, the two lines being nearer together at their middle, wider apart at the inner margin, the space between them and within the inner one being irrorated with black scales; a submarginal series of seven bright ochreous spots, broadly defined inwardly with black, one in each interspace except the two lower, which are smaller and placed between the first median nervule and the submedian nervure; the outer margin broadly black, bearing two obsolete paler lines. *Hindwing* crossed by four black lines, the space between each pair, and between both pairs being thickly irrorated with black scales, especially at the lower extremity of the outer pair, where the ground-colour is entirely black, at the upper extremity the ground-colour increasingly to the costa is very pale ochreous; a submarginal line composed of six lunules, each lunule having a bright ochreous spot placed outwardly against it; the outer margin more broadly black than in the forewing, the black portion ending at the first median nervule, bearing two intensely black lines, the outer one defined on both sides with a pale fine line, the outer of these two pale fine lines becoming almost pure white from the tail to the anal lobe; which latter, together with a round spot above it is bright ochreous, defined (especially outwardly) with black. There are also some small white, black, and metallic deep steel-blue markings above the round ochreous spot. The tail black, the extremity white. UNDERSIDE pale ochreous, the outer portion of the *forewing* and on either side of the submarginal lunules on the *hindwing* somewhat deeper ochreous, becoming ferruginous at the anal angle of the latter. All the markings of the upperside, but narrower and better defined, with no black irrorations, the outer margins (except the extreme margin which is black) concolourous with the rest of the wings; the veins throughout pale ochreous. *Antennæ* black, the extreme tip ochreous. *Thorax* and *body* rich ochreous above marked with three black lines, beneath pale ochreous.

Length of forewing 1·15; whence expanse = 2·4 inches.
HAB. Great Nicobar.

Closely allied to *C. thyonneus*, Cramer (pl. ccxx, figs. E, F), from Amboyna and Bouru in the Malay archepelago, but differing from the

above quoted figure in its much darker colouration throughout on the upperside, more especially on the outer margins; but on the underside it is much paler.

II.—*On the Measurement of Solar Radiation by means of the black-bulb Thermometer in vacuo.*—*By* S. A Hill, Esq. *B. Sc. Metl. Rep. to N. W. P. and Oudh. Communicated by* H. F. Blanford, Esq. F. R. S.

[Received March 29th :—Read April 4th, 1883.]

The interesting results of sun thermometer observations, published by Mr. Blanford at page 72, Vol. LI, Part II, of the Journal of the Asiatic Society of Bengal, suggest the possibility of making use of the instrument to measure the heat received from the sun. Even with all the precautions adopted by Mr. Blanford, the excess of the maximum temperature in the sun, above the maximum in the shade, is affected by variations in the following and perhaps other conditions, as well as by variations in the heat emitted from the sun.

I. The thickness of the atmosphere traversed by the sun's rays, which, for moderate degrees of obliquity, may be taken to be proportional to the secant of the sun's zenith distance.

II. The absorptive power of the clear transparent atmosphere, which probably varies with the proportion of water vapour in it.

III. The quantity of haze and dust in the air.

IV. The radiating and reflecting powers of the ground surface in the vicinity of the thermometer.

V. The excess of the maximum air temperature above the temperature at the hour, when insolation is most intense.

The last mentioned condition is subject to a very distinct annual variation. At Allahabad, where hourly observations have been made on four days in each month since 1875, the insolation is most powerful on clear days within a few minutes of noon, while the average excess of the maximum above the noon temperature of the air is the following:

Jan.	Feb.	Mar	Apl.	May	June	October	Novr.	Decr.
3·5°	3·5°	3·9°	4·1°	3·9°	4·2°	4·3°	4·4°	2·9°

In order to obtain comparable values for the several months we should therefore add these corrections to the figures for Allahadad given by Mr. Blanford. In table I the figures in Mr. Blanford's second table are thus corrected, and the table is extended down to the end of 1882.

TABLE I.—*Excess Temperature of the Sun thermometer on clear days at Allahabad above the air temperature at noon.*

Year.	Jan.	Feb.	Mar.	Apl.	May.	June.	Oct.	Nov.	Dec.	Mean for 9 dry months.
1876	66·1°	65·7°	63·9°	60·6°	56·5°	57·3°	60·3°	64·0°	64·0°	62·0°
77	63·0	66·7	63·6	62·4	60·0	57·4	59·8	63·0	63·4	62·1
78	65·9	64·3	65·2	64·5	62·3	57·8	59·6	64·7	64·6	63·2
79	64·2	63·9	63·7	62·6	61·8	61·0	61·1	64·9	63·5	63·1
80	63·0	63·8	60·3	59·9	62·0	61·5	58·3	62·5	60·6	61·3
81	62·3	60·9	61·9	60·4	60·3	63·0	54·8	61·8	59·9	60·6
82	60·5	61·5	60·1	61·1	60·6	59·1	54·8	62·2	58·2	59·8
Mean.	63·6	63·8	62·6	61·6	60·5	59·6	58·4	63·3	62·0	61·7

Variations in the fourth condition, above specified, cannot be allowed for or corrected, unless by means of a long and troublesome experimental investigation, but those of the first, second and third conditions may perhaps be estimated by mathematical methods from observations already made. Pouillet's formulæ, it is true, has a rational basis only when it is applied to radiation of one definite degree of refrangibility; but, as an empirical rule, it probably gives results not very wide of the truth when the altitude of the sun above the horizon exceeds 40°, as it does at noon in Allahabad during every month of the year. If, then, we take α to represent the diathermancy coefficient of dry air, or the proportion of the total radiation, transmitted vertically, through a layer of dry air which produces a pressure of 1 inch; β, the diathermancy coefficient of vapour, the tension of which is 1 inch; and γ, the proportion transmitted through an atmosphere containing dust or haze to the extent of one unit on an arbitrary scale, we have—

$$\log r = \log R + b \sec z \log \alpha + f \sec z \log \beta + d \log \gamma.$$

The proportionate number for dust and haze, d, being somewhat uncertain, there is no advantage in applying to it a correction for obliquity, especially as the vertical thickness of the dust layer is greatest in the hot weather months, when the sun's rays fall almost perpendicularly. The number for May, the dustiest month, being taken at 10, the proportionate numbers I have assigned to the other months are:

Jan.	Feb.	Mar.	Apl.	May	June	Oct.	Nov.	Dec.
3	4	7	9	10	5	0	1	3

The mean values of b and f, barometric pressure and the tension of vapour, are given in tables II and III. In strictness these should be

taken only for the clear days in each month, but the means for all the days here given, are practically the same in the case of barometric pressure, and there is no difference in the pressure of vapour, of any importance, except in the month of June.

TABLE II.—*Mean Barometric Pressure; 29 inches.*

Year.	Jan.	Feb.	Mar.	Apl.	May	June	Oct.	Nov.	Dec.	Mean for 9 dry months.
1876	·681	·626	·541	·389	·300	·199	·605	·670	·787	·533
77	·795	·736	·585	·506	·369	·236	·601	·678	·733	·582
78	·771	·704	·599	·478	·380	·198	·482	·615	·693	·547
79	·723	·646	·554	·402	·274	·210	·546	·686	·717	·529
80	·679	·652	·509	·390	·305	·164	·562	·727	·768	·528
81	·779	·690	·598	·417	·326	·219	·519	·653	·743	·549
82	·751	·652	·557	·416	·337	·182	·492	·689	·711	·532
Mean.	·740	·672	·563	·428	·327	·201	·544	·674	·736	·543

TABLE III.—*Mean Tension of Vapour in inches of mercury.*

Year.	Jan.	Feb.	Mar.	Apl.	May	June	Oct.	Nov.	Dec	Mean for 9 dry months.
1877	·312	·295	·356	·330	·524	·744	·678	·447	·343	·448
77	·428	·349	·450	·534	·592	·784	·642	·474	·424	·520
78	·364	·431	·392	·486	·630	·640	·648	·454	·318	·485
79	·325	·354	·356	·325	·491	·746	·704	·365	·306	·441
80	·335	·349	·417	·400	·650	·823	·605	·409	·340	·481
81	·284	·357	·431	·433	·642	·854	·612	·352	·306	·475
82	·335	·289	·300	·348	·469	·855	·635	·428	·348	·445
Mean.	·340	·346	·386	·408	·571	·778	·646	·418	·341	·471

Unless there be more than is generally admitted in Dr. Balfour Stewart's theory that the occurrence of sunspots is determined or controlled by the positions of the planets, it may be assumed that solar activity is not subject to any important variation of a period equal to one of our years. The monthly mean results of table I may therefore be taken to represent the radiation of a mean sun modified only by terrestrial agencies; and we may proceed to apply the above modification of Pouillet's formula to these monthly means, in order to find out the relative absorbing or scattering effects of dry air, water vapour and dust or haze. The nine months give

nine equations, from which, by the method of least squares, I have arrived at the following results:

$$R = 80{\cdot}^{\circ}434^{*}$$
$$\alpha = {\cdot}99856$$
$$\beta = {\cdot}71186$$
$$\gamma = {\cdot}99393$$

The value of α is identical with that which I obtained from Mr. Hennessey's observations at Mussoorie, while that of β is intermediate between the two values computed from the observations of the 12th and 14th November 1879, at Mussoorie.† Clear dry air of 30 inches pressure absorbs about 4¼ per cent. of the total radiation which falls upon it vertically; while water vapour, with a pressure of 1 inch below and the average vertical distribution, absorbs 29·8 per cent. The effect of dust is less than might be expected, the loss due to this cause in May being apparently only about 6 per cent.; but this is doubtless because the dust is not a simple absorbent, for it scatters or reflects the rays in all directions, and some of these reflected rays reach the globular bulb of the thermometer. An actinometer, arranged to receive parallel rays only, would indicate a much greater loss, on account of suspended matter in the atmosphere.

The monthly means computed by these constants, and their variations from the observed means are as follows:—

Jan.	Feb.	Mar.	Apl.	May	June	Oct.	Nov.	Dec.
62·9°	64·0°	63·4°	62·9°	59·6°	57·4°	58·6°	64·4°	62·2°
—0·7	+0·2	+0·8	+1·3	—0·9	—2·2	+0·2	+1·1	+0·2

The most important difference is in June, when the computed value is 2·2° in defect. This is almost certainly the result of taking the mean vapour tension for the whole month, instead of that for the clear days only The other differences are probably due, in great part, to the unavoidable neglect of variations in the condition of the ground surface.

Applying the formula to the observed mean radiation temperatures for the nine dry months of each year, and taking the proportionate number for dust to be the same each year, we arrive at the following results:—

Year	1876	1877	1878	1879	1880	1881	1882
Corrected radiation temperature.	80·05°	82·60°	82·67°	81·23°	80·23°	79·12°	77·11°

The last minimum of sun spots having occurred in 1878, while 1882 was probably a maximum year, these figures indicate a variation in the solar heat of very considerable range, and in the opposite direction to that

* The degrees of the sun thermometer are only arbitrary units, which cannot be readily converted into units of heat per unit of surface per unit of time.

† Proceedings of the Royal Society, No. 219, page 436.

made out by Mr. Blanford. This contradiction in the results of the two investigations, and the range of the variation here indicated, which amounts to 7 per cent. of the total radiation, make it sufficiently clear that, when every possible allowance is made for disturbing causes, the indications of the black bulb thermometer are an uncertain measure of the sun's radiation. The absorption coefficients for dry air and water vapour, now determined, agree, however, so well with those deduced from Mr. Hennessey's excellent actinometrical observations that they may be accepted with some confidence.

III.—*Notes of a trip up the Dihing basin to Dapha Pani, &c., January and February*, 1882.—*By* S. E. Peal, Esq.

[Received June 24th;—Read August 1st, 1883.]

(With Plates II, III, IV, V and VI.)

The question of the treatment of savage races bordering on, and trading freely with, a civilized power, has always been a difficult one to solve. Whether at the Cape, New Zealand, America, or Central Asia, it has generally involved the paramount power in a series of petty wars, injurious to both sides and ending in the subjection, and too often the degradation, or extermination of the savage.

This contest—inevitable in the end, where the civilized and savage communities are in juxtaposition, is often regretted by the former, and efforts made to mitigate the result, which is well known among Ethnologists.

The treatment of the various savage tribes that surround Asam and offer such marked contrast to the Aryans of the plains, is therefore a matter of some moment. Most of them have no doubt had a common origin, their ancestors having peopled the centre, north, and east of Bengal, of the plains of Asam, whence they have been driven (by the advance of the great Aryan tide) to the hills around.

Looking back into the far past, we should probably see the whole of India a huge and almost interminable tropical forest. Here and there Júm clearings, with villages at some little distance apart, the houses of which, perched on pile platforms, would doubtless be the exact counterpart of those built by these hill men at the present day—and characterized by their length and low eaves. The spear and dao would be in every hand, and the dug-out on every river. To the latter these tribes gave names which survive to our day, and attest their presence. Head-hunting and tattooing would probably be universal, isolating and no doubt differentiating the communities then as now, for the extraordinary number and variety of languages and dialects on the non-Aryan basis, contrasts with the Aryan group, and would point to "head hunting" as the cause around Asam.

A conspicuous feature among these Hill tribes, and one to be expected, is their great intelligence in everything relating to their jungles, customs,

cultivation, or warfare, and equally conspicuous is their incredible ignorance of us and our power.

When examined, however, this is to be expected from their long tribal isolations, which precludes the possibility of their gaining standards at all capable of measuring us. They may see a good deal, and hear more, but the power of realizing it is absent, they must judge of us, our works and aims, by their own absurdly inadequate standards. This is a misfortune for them, which *we* hitherto have only partly realized, and is the cause to some extent of our failures in dealing with Hill savages, notably also do we as yet fail to realize the danger (to us) of their ignorance.

Anything which can remove this, now that we have settled as the paramount power alongside them, should be welcome to both sides, and taken in hand by us as a matter of state policy.

Missionary effort, trade, or pure travel, are all means whereby knowledge of us may be steadily and safely extended. The first is specially advantageous, and in most cases produces among savages such as these, the happiest results. Its advantages immensely outweigh all attempts at civilizing by Government in other directions, as secular schools, courts, &c.,—and is also much cheaper. Its effectiveness also is enhanced by the fact that Missionary effort is often self-propagating, the desire is natural among converts to extend to friends living in lawlessness and danger, their own quietness and peace. As a means of weaning at least one generation from their unruly habits, and head-hunting propensities, ere we absorb them as "subjects," this argument is of the utmost importance. Missionary effort should precede by at least a generation, any attempts at settlement, and taxation.

Trade is undoubtedly one means of extending some knowledge of us, but unfortunately developes qualities of a lower order. The desire to cheat is innate, and both the desire and opportunities to steal, are often irresistible. Thus one of our difficulties with these Hill men is fostered and developed as time goes on, excellence in cunning ensuring success; thus the Missionary can do more good than trade.

The usual result of all attempts to civilize the unsophisticated savage right off is to exterminate him, there is need of an intermediate stage of some duration in which our civilized stimulants, and smartness are not experienced. A stage during which the savage surroundings and traditions can die down, if not die out, and render the new generation free to see, and adopt, what is advantageous.

Freedom to adopt our vices is hurtful, and our later civilization should so to speak be administered by a spoon. Unless we turn attention to these matters we shall find that the growth of "intelligence" among these Hill savages is also a growth in our difficulties in dealing with them.

Travel alone is one good means of disseminating knowledge of us and our aims, and of counteracting the endless series of rumours to our detriment. Notably useful is it in politics and our state relationships.

Formerly our Empire was scattered, and the need for consolidation by conquest and annexation imperative and patent. That day has departed, but its traditions remain on all our frontiers, needing reiterated refutation.

The experiences of travellers to the east and south-east, confirm this. On the present expedition the extraordinary and sudden change in every one, as soon as it was explained that I was only a "tea planter," out amusing himself was frequently suggestive and ludicrous. A Government officer is both dreaded and suspected, as a rule, when found travelling among these hills to the east. But apart from the questions of legitimate attempts by us, to favourably influence those around our borders, or explain our good wishes, lies the fact, that we stand almost as much in need of enlightenment regarding them, as they do of us, and that the results of our ignorance may be—indeed must be—a decided disadvantage to all. Anything which tends to remove that mutual ignorance, may be hailed as a decided gain. Large and highly appointed expeditions are here out of the question, or entail serious risks, the main obstacle being the difficulty of procuring supplies, and transport. On the other hand a small and unobtrusive party, can generally secure sufficient to enable it to push on, especially if independent of the need for "transport."

But while the benefits to be conferred and gained by travelling among the hill races on our N. E. frontier are clear to all who know the country and people; there are other matters of interest that can be investigated at the same time. *Commercial*, *Ethnological* and *Geographical* problems these await solution even if the discovery of a feasible route to western China be admitted as demonstrably impossible. The discovery of a trade route east out of Asam, viâ Patkai and Hukong towards the Shan States, had engaged my attention, since 1869, and following the example of Mr. H. L. Jenkins, I was enabled by actual observation, to determine the heights of Patkai and the Nongyang valley on the southern or Burmese side, demonstrating that the line taken by the Burmese of old was really easy and feasible, even for a cart-road, and not the formidable or insuperable barrier that so many supposed. I am here glad to be able to record the conversion of Mr. Lepper, to my views, the more so as he so strenuously opposed them for so many years. It is, however, one thing to find a route out of Asam towards the east, and quite another to find an easy one into western China.

Formerly most of us supposed that if once out of Asam, there would be little or no difficulty in entering China, the main difficulty of a trade route was supposed to be Patkai.

The travels and careful observations of, Gill, Baber, and Colquhoun, however, leave no reasonable doubt that our dreams of an easy trade route to western China cannot be realized, and Patkai is but the first of a series of increasing difficulties.

Exploration for the purposes of a trade route are more needful east than west of Irawadi, and the unsettled state of upper Burma, compelled me to look to the upper Dihing basin, as the site of this trip. The only European who had visited it being Wilcox in 1827.

The following is an account of my expedition during part of December 1881, and January and February 1882.

As on former occasions, I took my own load carriers, and depended as little as possible on getting "locals." To lighten their loads, and at the same time carry things securely from theft or temptation, I had 8 or 9 small Sasi wood boxes made to hold most of the things, and measuring about 18″ × 12″ × 8″ weighing 3lbs. and with locks and hinges, 3 alpine tents of strong Jean, 7 feet square, and weighing 8lbs, poles included; when rolled up served as padded poles or "kanmaris" to tie loads to, and they enabled us to house ourselves comfortably in a few minutes, the whole load being about 30lbs. per man. Provisions for the men, such as rice, oil, salt, ghi, sugar, &c., I procured as we went along and laid in a good supply at the last of the little shops up the river. My own provisions largely consisted of Kopf's soups, sausages, Californian beef, dessicated soup, "coffee and milk" &c., in tins, also biscuits, butter, tea, and coffee &c. At the same time most of these were really carried as reserves, my daily commissariat being generally furnished locally en route, by presents or purchases of fowls, ducks, eggs and fish, or got by shooting.

Thus a traveller really need not fear a difficulty in carriage of provisions, until he leaves the inhabited tracts, and has to face 10 or 12 days of complete isolation.

As before when on similar expeditions I took a good kerosine wall lamp and a supply of thick buggy candles that require no stand; also as arms a D. B. C. F. No. 12 shot gun, revolver, and a beautiful little Martini Henry Carbine weighing only 4¼lbs. that carries to about 900 yards and has cartridges of 14 to the 1lb., a very handy little weapon that can be carried slung all day long with no fatigue. Presents of beads, strike fires, a few cloths, and electro mugs for the chiefs also, were necessaries, as well as a small selection of medicines.

Starting from Jaipur on the Dihing at Christmas we went to Makum by land which is a mistake, and travellers should at once take canoe for Bisa, or as far beyond as possible. Having to wait for Daks we camped early at the "Jura Pung" the road to which was along the boundary of the Makum forest reserve. The Pung is a salt lick and shews the remains

of the elephant catcher's stockade, ditch, and rampart, made in the time of Purundur Sing the last king of Asam, 1830 or so. Close by, the men found on a little hill top a grove of tenga trees, limes, shadocks, oranges, and citrons, and I measured a nahor tree 10 feet girth at 12 feet up and some 45 to first branch, the stem straight as a pipe, near by also were huge mekais, or *Dipterocarpi* 12 feet in girth and 100 to first fork.

For a considerable distance around the Pung, the jungle was a perfect maze of little paths of clean white sand, and one could easily get lost. Here, while two of the men were collecting dry logs for the camp fire, they espied some animal, and at once stalked it among the paths, taking it for a deer, soon, however, they became aware that it was stalking them, and that it was a remarkably fine tiger. Both sides simultaneously discovering that the other was not a deer, decamped in opposite directions, I went out but of course only saw the track, which measured 19″ in circumference. As night closed in, the usual uncanny jungle noises broke out, the "Koot-Koot," or "Boot-Boot," of the large land Lizard or Gui up to 6 feet at times, in the twilight depths has a peculiarly unearthly sound, and the large owl called "Húndú," also has a sort of moan about the "*Húndú*" it utters. The three calls are by the *pair*, and not one bird, this can be often verified as they now and then sit in different trees, first 1 then 2 and 1 again. The clear scream, or yell, of the "Mor Sorai," is another of those weird sounds that night birds seem to delight in, and it favoured us several times, despite the firebrands flung towards it.

Next morning we had breakfast ere starting, and at 10 A. M. all the loads were tied and we got off, but I had to make my servant mark out our track among the paths by small fragments of paper dropped behind, for the Dak to come by. We soon entered a remarkably fine forest, trees of 100 feet to first branch, and 13 feet girth, not uncommon, and smaller ones pretty close. The undergrowth, largely ferns, canes, and herbaceous jungle on a sandy soil, the latter very red among the little hills we soon entered, the path going at times over, or among the knolls and up stream beds. Here and there Tokú palms, *Lirestona Jenkinsia*, rose to what all estimated as fully 50 feet, the huge fan shaped leaves spreading out above as a sort of green canopy. The Dak soon overtook us, thanks to the pieces of paper, and without which the men would have been "tried" all night fasting, and appeared (perhaps) at Dúm Dúma next day. At dusk we camped at the Powai having again made a very short stage purposely.

Starting about 8 A. M. next morning we very soon reached Makum on the Dihing, where we breakfasted, and I stayed some time getting stores and information. In the afternoon we proceeded again and camped at a small Duonia village called "Tora Kusi," as I heard that men from "Bor Kamti" were there.

These soon made their appearance, and I learned they had only lately come over from the upper Irawadi or Mlikha, together with some "Kunungs." Two of these latter I was glad to see and found them as pale or paler than the Kamtis, colour as near as possible 33 to 45 of M. Broca's scale. Hair straight and cropped *a la Mishmi*, no arms with them, and not tattooed. Though dressed like Kamtis in a white dhoti or waist cloth, and another round their shoulders, there was an unmistakably "Noga" cut about one of them, and it was some time ere I could detect that it lay in the way the hair was cropped. Later on I saw a good many more of them, and so far, they seem to unite the Noga groups to the south, with the Mishmi and Abor groups of hill men to the north of Asam, but their colour is paler than either. At the camp fire I learned a good deal regarding them, and the route they had travelled.

Next day we made the Kamti village of "Bor Phakial," the head quarters of the small colony of Buddhist Shans in Asam, and which I described on my last visit.* I here found that the party of Kamtis over from Mung Kamti on the Mlikha or upper Irawadi, were staying at the "Munglang" Kamti village just below, so I went to see them, finding also several other Kunungs who it seems had come over in the same party, to see the wonderful country where all their daos went to. None of these Kunungs, and only one of these Bor Kamti men had ever seen an European. The information gained now was added to subsequently, and may be summarized further on.

At Bor Phakial I had many enquiries as to where I was going this year, all the better informed men at once declared it either too late or too early to attempt to reach "Mung Kamti," and that beyond Khomong on the Dihing three days east of the Dapha Pani I could not go (before April at least) as the snow had now fallen on the ridges of the water parting beyond, called on our maps, Phungan Bum, and occasionally by them "Bongan." The party, indeed intended to wait till April for this reason. They also represented my party as too numerous, and this I found true, for while it might not be difficult to procure cleaned rice at villages *en route*, for six or seven persons, it would not be so easy to get it for 12 or 14 without waiting a day. This determined me to reduce my party and 6 men were sent back, leaving me 5 load carriers, my servant, self and two boatmen or guides. These latter and a canoe I secured, and with them started up-stream the next day; the loads in the boat and the men going along the banks and sands, were crossed by the canoe at the deep pools. All hands assisted the boat at the rapids. As on last trip, we camped at the Tirapmúk, where the regular Noga hill route to Burma over Patkai emerges, *vid* Kherimgams village. Next day we went on to

* Vol. L, Part II, 1881, A. S. B.

Moko, near Nthem, and camped on the sands near the little Singphu village, where I found the remains of a large bund running due north to the sources of the Dibru, some 12 miles off the bund being called the "Pangori Gor." The ditch was to the eastwards and none of the villagers could tell anything about it, or the meaning of its name, though attributing it to the Ahom Rajas. In the early morning ere the fog cleared off, we were much amused by watching a large troop of the common "Bandor" monkey, collected on the opposite banks and gradually all swimming the river, a couple of hundred yards above us. The river being at its lowest and about 100 yards over. There were about 200 of them, and the very smallest crossed on their mother's shoulders, holding on to the head.

Many of them on our shallow side seemed to leave the water reluctantly, it was warmer than the air, by some degrees, and all scampered about on the sands to dry themselves. After some bargaining for fowls, eggs and rice in exchange for opium, we started on. The plan, being to draw entirely on local supplies where they can be procured, which saves those in store.

At "Paka-i-ling" where we camped again early, the river takes a bend past some sandstone ledges with a very deep pool. On the wide flat sand were the tracks of elephants, wild and tame buffaloes, tigers, leopards, aud several cats, otters, lizards, turtle, large and small, the eggs being found, deer of three kinds, *i. e.*, horse deer or Sambur, Horina, and Huguri, or hog deer, monkey and bird tracks also crossed. Even insects left their mark, for in the drier portions near the bank the sand was quite pitted by the ant lion.

The following day we reached the Kerim Pani at 11 A. M. camping at Bisa, a little way up-stream. Formerly this dried suti was the main one, but for some ten years or so the water now comes down the M'ganto.

As there seems to be confusion arising as to the names of the rivers here—I may state that the term "Buri," as applied to Dihing from Brahmaputro up ends here, the upper portion of this river is simply *Dihing*, and the "no Dihing" is only that portion that broke out some years ago and flows to Sadia.

At Bisa I was obliged to stay several days waiting for another boat, the village consists of about 16, more or less dilapidated sheds, of the usual pile-platform type. Formerly it was of considerable importance as the residence of the Singphu chief "Bisa Banka," or Bisa Gam, and since his death in 1878, the place is of less moment.

The late chief's head wife, has now adopted as husband, Chauing son of Latua, one of Banka's brothers, and he is called "Gam." Eventually there may be a dispute as to who is to be Gam, as the late chief's son Chautong is now growing up and will be a smart lad. While here, my visit

was considered most opportune, as the Gam's wife before mentioned, had presented her adopted husband with a son, I was informed that had I not appeared auspiciously, it might possibly have turned out a daughter ; I also here met a young Singphu chief from Hukong named "Urup no," who had come over to espouse Banka's second wife, a rather good specimen of a Singphu girl. Urup no, gave me some little information, and confirmed more, regarding Hukong. He had travelled down Dinoi for some distance, towards Somjok which he called Somshok. The Lanier, or nam Pagna, he also called the Pang-lai-kha.

Though anxious that I should see Hukong, and certain that I should be well treated, he told me, it would be necessary to obtain the consent of the Gams ere going, and that simply as one chief's son alone, he could not invite me officially over. He corroborated what I had before heard as to the difficulties being not so much of a physical nature, as the dealing with such a disunited series of petty chiefs all bent on extorting as much as possible, and in fear of no paramount authority. Passage from the Burmese side he considered far easier, if with the Woon's consent. I gave him a few sundries "to shew his friends," as he said, such as a spring tape measure, and electro table-spoons, also a few sorted beads, among which large red and blue bugles, pleased him immensely, not that he would wear them, for Singphu men do not care for beads, but as something quite unique.

As a sample of a chief's son, he was above the average perhaps—tall, well built, a fine expressive face, plenty of long straight black hair rolled up in a knob on top of his head, good hands and feet. His manner was authoritative and at times excitable, and when playing a favourite game with cowries and dice, he could dash them down and yell out as loud as any of them. The little M. H. carbine of course took him immensely, and the accuracy of its fire at 200 yards, at the same time he recognized its uselessness to them on account of the difficulty of the cartridges.

I also here at Bisa saw two more of the Mung Kamti party, and learnt a good deal from them as to how the Kunungs smelt their iron ore which is of two kinds, stone-like, and sandy. It is converted in a small furnace of hour-glass shape, to which blast is applied from 6 or 8 pairs of the usual vertical-tube bellows, the pipes from which converge to the furnace, in the centre, and relays of men work the blowing. Fresh ore and fuel (of charcoal) is now and then added, and after about 12 hours, the ore is formed as a flattened lump at bottom weighing about 4 to 6 seers. Hammers and anvils are of stone, the former held by a creeper and often with two handles. The bellows, a pair of tubes made of the large Wra bamboo, with feather-edged pistons and vertical rods to hold, there are no valves I believe.

A little rain fell while we were camped here, which all were glad of, as it was bound to come on us otherwise when travelling. We also laid in stock of rice, sugar, ghi, oil, salt, flour, tobacco, and on the 5th went down to the river and met the canoe Chauing had lent me, a large party of Sonkap Nogas down about rubber, passed me on the bank, and as before in 1879 sidled and scuttled past, as if in fear of their lives, turning round after for a good stare, quite a contrast to the Nogas of the west, where they see Europeans often. Their chief stayed to look at the little rifle, and was rather astonished to see the bullet from it fall close to a snag at 400 yards off that I aimed at, in the water.

As our guide Lutak Kamti desired to get a mate in lieu of the one who returned with the other canoe, I camped at once, and in the morning he came with a middle-aged Singphu named Thang, a right good willing fellow, and the only drawback to him was he could not speak Asamese, he was quite equal as a rule to the work of two ordinary men, and said nothing about it. These two managed the boat and foraging at villages, Lutak being interpreter.

From all sides I had heard that we should never get the canoe up M'ganto, and the prospect was not pleasant, as for three or four days after leaving Jagon (the next village) there were none near us, and the country was wild; however I trusted to get up as I did Namtsik, where at the rapids all hands in a line cleared the worst of the boulders from a narrow (2 feet) channel and then dragged the canoe up, the same channel serving to return by.

At night it rained, and we had the pleasure of hearing at once a tiger on each bank, giving their loud sharp whistle, so well known to all jungli-wallas. They seem to indulge in it mainly when hunting, and hence can be distinguished at once from the leopard, with his deep "haunk-haunk," whence he is called the "Hawkra Bagh." The tiger's whistle is loud and sharp, closely imitating that of the Samber deer, and may be due to natural selection, as the deer go to the sound, as hunters well know. The whistle of the tiger, however, can generally be distinguished from that of the Samber. The peculiar "creep" it sends up one's back seems due to association, as I know a man who used to go out whenever he heard it, unarmed, to try and "see the deer," as he thought, and never felt anything but curiosity, until the case was explained.

The roar of the tiger again is so like that of the elephant that few can tell the difference, and as we heard it also, were not certain that elephants were near, until we saw the tracks next morning.

At dawn the rain left off and after breakfast we loaded and started on, most of us on the sands and shingle meeting some Nogas who had come about rubber from Numyung side, about five days beyond Patkai, some among

them wore the peculiar little narrow slip of cloth tied tightly between the legs, that keeps the testacles in the abdomen, and which is common among the Sonkap, Namtzik, and Tirap Nagas. We soon reached Jagon a small Singphu village and as it was our last village for some days and I had to get opium from the Kyah there, we camped just above it. Here I noticed many mounds, bamboo clumps and some trees, that the inhabitants who were Singphus, declared must have been remains of Ahoms in former days. I also saw and sketched here, a "Gabru Morong" or house in which all the single girls of the village sleep. All through these hills north, east, and south, the various tribes have a peculiar custom in common, and under various local names. It is that the single folks (generally the lads) have to sleep in separate houses called by Asamese, "morangs." These are of two kinds, *i. e.*, the Deka morangs, of the grown young men, who also act as guards, their houses being often on the outskirts or outlets of a village, and the little boys' morangs, where they all sleep together, and are under certain laws or regulations of their own. In some villages as among the Bor Duria Nogas there are as many as 10 and 12 Deka morangs, several boys' morangs, and three or four, for the unmarried girls. Incautious or abrupt questions regarding these latter, especially by strangers are apt to produce denial or evasions, as these hill men well know that our ideas of chastity are not theirs. But at times they speak out plainly. Lately a "Bor Duria" Noga who was giving me a list of his village morangs, in reply to my query as to whether the young men went to the girls' morangs, said "na pai, na pai, dinot na pai," not in the day, they would be ashamed, but after dark after all had eaten, then they went and all had great fun, it was their custom.

Among all these tribes this is more or less the custom, and we may truly say their chastity begins with marriage, juvenile chastity is not the rule, but the exception, I am aware that this is contrary to the recorded opinions of many; nevertheless I am sure it is true, nay more, it is apparently a race character of long standing, undoubtedly existing among these hill savages ere their dispersion by the Aryan invaders. We see this identical custom now among the races, north, east, and south, of Asam, races whose languages (originally from one stock) are now so different as to be quite mutually unintelligible. The custom also is so similar and peculiar as to preclude the idea of separate origin in each tribe. Like the "pile platform" houses we see among these same races, it appears a relic of very high antiquity. A custom that has survived the dispersion of these tribes from some common centre, and proof of original unity. To anthropologists it is of value as a link joining our present system of morals with the prehistoric past.

As we see the custom about us, it generally appears that the unmar-

ried have to sleep away from the parents' house, at times only the boys and young men, at others the young women and girls also, but in this case they have different houses, though all are called by the Asamese "morangs." Among the Bordurias, Mutons, Banparas, Jobokas, Sanglois, and the tribes near, they are called Pá, (pah) ; west of the Diku river I hear these morangs are called "Ari zu," and there are different tribal names for them among the Singphus, Mishmis, Miris, and others, on the north or river bank of the Brahmaputra ; attached to them are I hear fixed rules or laws, which it would be most interesting to collect and collate, and which may doubtless yield a clue to their origin. Viewing the "morang" as a phase of social evolution, it is probable that we have here before us one phase or form of the transition from original sexual liberty, to our institution of marriage and modern ideas of chastity.

The idea that sexual fidelity begins with *marriage* is here obvious, and almost implies that the institution began by capture, or purchase, giving a pair the right to live separate, as has been urged by many. A curious feature of the case confirmatory of this, is, that sexual infidelity by the female *after* marriage seems rare, much more so than among civilized communities. At this Jagon village there was only one morang and that for girls, the allusions to it I heard when we were returning, were unmistakeable.

After starting next day I stalked a pair of the large brown Brahmini duck, a wary bird on these open sand flats, and only to be got by wire cartridge or when flying over. It then occurred to me, to note the relative distances at which game of all sorts takes alarm, a great deal depends on the presence or absence of cover. As a rule wild buffalo, or Gaur called here Mithon, moves at 300 to 400 yards, pig and deer in the open 200 to 300, but in forest these often stand at 100 or even less. Tiger and leopard, if in the open, make off at from 100 to 200, though I have known the former on a path in front of a man, to walk aside some 20 yards *to let him pass*, and quietly walk on after he had done so ; most monkeys scamper off at 50 yards, and do not mind being seen. The Hulok or ape on the conary though arboreal, can seldom be seen, at least within 50 to 100 yards. Otter become fussy and try to frighten one at 80 yards, but if quiet they will often come quite close. Turtle generally drop off the snags they rest on, into the water, when I get to within 30 or 40 yards. Among birds there is a marked difference between the vultures as a group and most others of equal size, unless they are habitually protected, like the wild geese on the Sibsagar tank, storks &c. Insects seldom rise before three or four yards, while those that mimic inanimate objects can be actually pinned often ere they attempt to move. Probably our ancestors soon became expert missal throwers, and this differentiated them from the nearest allies. But to re-

sume our journey, by 2 o'clock we reached the mouth of the Namrup river, up which on the last trip I travelled for Patkai and Nongyang. It was now deep and sluggish at the mouth, while the M'ganto we now entered was conspicuously shallow and rapid, the water being remarkably clear. Inland all along on each side, was much the same jungle, as below, the same tangle of rattans, creepers, tall grasses, and tora or wild cardamum, 15 feet high. The trees of the ordinary Asam mixed forest, Modar, *Erithrina Indica*, Simol, or cotton tree, *Bombax malabarium*, Sahm, the wild jack *Artocarpus chaplasha*, ajar, *Lagerstræmia Regina*, figs unlimited, (except *Elastica*) Acacias, Eugenia, Michelia &c., &c. The huge reed-grasses as Nol, Kugra, &c., covered the edges and flats wherever possible.

Snags were plentiful all along but in the M'ganto remarkable for their numbers and size. At one place where there was a channel of deep water spanned by a huge stem, we all used it as a bridge, and the men said a canoe of 150 maunds could be made out of it. The large and straight stems I met with here and there fit for canoes struck me forcibly.

The regulation taxing all timber of certain kinds found in the river beds, might well in these wild places up-stream be suspended, the more so as in this same river Dihing lower down as much as Rs. 2,000 has this year been actually given by Government to remove by employed labour the snags and trees so dangerous to navigation.

Probably the regulation taxing the drift timber was instituted to meet cases where men might otherwise fell and float off timber growing near the banks, but apart from the fact that this of itself would be doing a service rather than the reverse, it might be borne in mind that the total harm these people could do as at present organized, could not possibly equal even 1 per cent. of the loss constantly going on through ordinary natural decay and storms.

Our camp was pitched at the tail of a small island four or five bends up the M'ganto suti, on sand close to a rapid and while some pitched the tents, others took the canoe as usual and got in a lot of large and small dry logs and branches, for camp fires and cooking. The tents and the guides' bivouac of leaves, generally formed a cross with a roaring fire in the centre, and small ones outside. With large fires no one would mind much the visit of either tiger or elephant. The wild solitary male buffalo was the only one we desired to keep clear of, as they frequently charge madly at anything that is strange, and disregard firebrands. Our three tents would certainly have been unbearable, luckily the only wild buffalo we came across were in herds or females.

After an early dinner I issued some "tea" and we had quite a jolly party round the fire, I usually lay at full length on my bedding and listen-

ed to the stories, or *guided the conversation*, in the dusk after dinner. The moon also was out and lit up the scene, and made us feel a little more at home.

I noticed our guide's mate Thang, both now and subsequently, very careful not only in how he tied the canoe in case of a rush of water taking it adrift, but also in the selection of a site for it, on enquiry it turned out that his caution was to enable us easily jump on board and push off in case of any sudden emergency. The old fellow was full of "wrinkles," though we probably did not see half of them, from his not speaking Asamese.

In the early morning at dawn we heard in the fog, a bear coming down along one bank, but though we all kept quiet, he turned off, ere he came near, perhaps having winded us. It is very curious that bear tracks are so seldom seen on the ground, and yet so very common up and down large tree stems. Judging by the tracks alone, here in Asam, one would suppose (of course erroneously) that bears were entirely arboreal. To one track on the ground, I have probably seen as a rule thousands on tree stems, one reason is that the latter remain, and those in mud or sand are soon effaced. At times they make what the Asamese call "nests," in trees, and I have examined several unmistakably made and used by them. They are, however, only "roosts," made by clawing in, and breaking, leafy branches that grow near, so as to form a comfortable place to sit or lie on, in the sun. I have seen as many as three in one tree, at various heights, the lower two broken with branches hanging, where they said the bear had, in rolling about, gone through; in all three the foliage had turned brown while the rest of the tree was bright green, and these roosts were thus conspicuous; the tracks were plentiful as marks and scratches on the tree stem but on the ground none. Generally the marks on a tree stem are those of the five claws.

At about 10 A. M. we got off as usual after breakfast, and found the rapids rather troublesome. At one place, going along the bank near a flat, all covered with high tufts of ekra grass, an Asamese on ahead suddenly bobbed down and pointed in, and creeping up we saw at about 100 yards a very large female wild buffalo, quietly browsing, and as usual a lot of mainas about, and on it. We waited to see more but she seemed alone, and had the long thin horns usual in some females. Later in the day we saw another, and while watching it grazing, several others appeared, eventually we counted nine and no big males. The four Asamese and the Kamti Lutak would not of course eat buffalo, and thus there was only four who would, *i. e*, myself, a Kachari, my servant, and the Singphu Thang who would have eaten several shares, so I selected a calf and fired with the little M. H. C. at about 200 yards, not being able to get nearer. At once several other

buffaloes rushed up and they formed a group and then rushed into the jungle alongside, the wounded one among them. On going up we found blood but to follow them in such jungle was madness, and we had reluctantly to lose the calf ; we subsequently found that a party of rubber-cutters had come across it dead, and jerked the meat.

Further on we passed a cunningly selected camp site, of five men who had been out elephant shooting. The ease with which the signs were read, the story completed, was noteworthy. Not an item escaped, it was no mere guesswork either, as they could explain their reasons for all they assumed.

About 3 P. M. we camped on what is an island in the rains, and whence we had a fine view of hills to the north-east that turned out to be beyond Mana Búm. In the morning we saw snow on a spur of Dapha Búm called Joitho, but it soon clouded over. A male and female Samber had been quite close to our tents in the night, their tracks plain in the sand ; this latter became gradually less and less, and gave place to shingle which is not so comfortable to sleep on.

At dawn or as soon as I was up, old Kamti, as usual, brought me some beautifully baked yams, white, flowery and piping hot, with some fresh butter, they make a capital start for *chota haziree.*

In the night the men found the cold so great that several got up and sat at the fire and half asleep droned out long monotonous ditties, the thermometer several nights stood at 45°, which in moving fog is pretty chilly.

Again after breakfast we went on, and had some stiff rapids to cross, at about 3 P. M. again, we reached where the No Dihing forks, in a wide flat valley with islands, while hills right, left, and beyond broke in view, the best certainly seen so far. The extent of the great shingle beds and banks, however, was the feature most noteworthy. I had expected to see something where a little engineering might be expected, to work wonders, in the water-courses, of either river, but as I stood there the idea of the attempt even with hundreds of labourers looked absurd, evidently in the rains these huge shingle flats are submerged, and all little efforts at cutting or damming would be obliterated.

This question of the diversion of the waters of the upper Dihing wholly back into their own old channel, down Buri Dihing, is likely to come up in the future, as the need for more water in the dry season for steamers arises. Having this in view I examined the lay of the country at the bifurcation, and went over the great shingle beds, taking note of their size and elevations. About half the total quantity of water just now was passing off, *viâ* No Dihing, and from where our camp was pitched, on the long spit dividing the two rivers, the levels were pretty much the same,

if viewed from either river or the central ground. A leading feature in the case is that for some distance down, either the No or Buri Dihing, there are frequent rapids with a fall at each of several feet, the channels in both cases lying well *below* the general level of the wide shingle flats on which the river divides, but quite an infinitessimal fraction of the total *water-way* as seen in the "rains." Thus while it might be possible by considerable expenditure of labour at the end of the rains to increase the flow down one particular river, as the Buri Dihing, by removal of shingle at the first and second rapid, at the fork, all this work would be quite obliterated by the ensuing floods of next year, which shifts the shingle and fills all depressions. The possibility of so far altering the channel as to render floods of extraordinary height likely is very remote. This indeed is not possible physically as long as the No Dihing outlet exists, only if this were completely closed (as it was originally) extraordinary floods might occur, (due to upper Dihing water) and for such occasions the Asam Rajas provided the bunds or Mataoris we see lower down along each side of the river some way in. If these are kept in repair there need be no alarm felt by residents on the Buri Dihing. On the contrary if they have anything to fear, it is that the whole river at least above Namrup may eventually take to the No Dihing branch and aggravate the present difficulty regarding *water in the cold season.*

Those who look at this question must remember that in "the rains" there is no liklihood of water being too low, the northern drainage from Patkai on which rain falls freely from the Namsang sources to those of the Namrup would alone give ample. It is in the cold season when the Tirap, Namtsik, and Namrup run dry, that the more elevated sources of the Diyun Kha and Daphapani hold good, and from whence a large proportion of the Buri Dihing water comes. The natural tendency would seem for this upper Dihing water to flow more and more *viâ* the No Dihing and cut off these cold weather sources from the old channel.

Early next morning as expected, I had a fine view in dark outline of the Dapha Búm, and the ranges beyond to the south-east, called by us Phungan Búm, the crest of the latter remarkable for its rugged and turretted skyline as seen through the large telescope at dawn with a power of 100. Both groups were more or less snowed, and the crests presented the decided, rugged, and hard outlines indicative by its texture, of bare rock, which hereabouts is one key to elevation.

As the light increased the view became better, to the south-east rose Miao and Wahambo over 5,000 feet wooded to the tops, and their lower spurs flanking the wide flat valley on that side. In the distance due east, lay the N'chong Búm, at the foot of which flowed the Dihing, behind it being the Phungan group. Towards the left rose the series of peaks culminating

in Dapha Bum, 15,000 feet in front, at that side lay Katoh, and below it the smaller "Mana Bum" ridges. Here and there in the open flat of the valley wooded islands stood out clearly and broke the monotony effectively. With the exception of "Maium" peak 6,939 feet no part of the Patkai was visible, and it was seen with some difficulty in the haze. After enjoying the view for a couple of hours making some notes, and having breakfast, we started on, and soon passed what is an island in the rains having trees on it, the age of which I estimated at 20 to 25 years, and another one beyond, at 12 to 15 years. We soon came to the end of the dividing spit as seen now at least (in the cold season), and found the Buri Dihing water pouring down a rapid at one side, with a fall of probably 4 feet in the first 50 yards, the shingle was all large, and in crossing at the head of the rapid, wading was not easy even though the water was not more than a foot to two feet deep. The stream was very strong, so much so that very little force sufficed to start the large stones rolling down. Except at the very throat of the rapid the bed was wide and flat for considerable distances all around and it would have taken a large amount of work to carry the gut of the rapid (as a depression) up into the wide, shallow, and swift sheet of water above, so as to drain it off. If done, however, there could be no reasonable doubt, that very little of the water would have reached the No Dihing.

It took all hands to run the canoe up, and at one time I feared she would be filled; however, we got her up all right.

As we went on we found it true that gradually the sand would become less, and give place to shingle. I had brought strong lace boots with projecting screws in the soles, but soon discarded them for wading shoes similarly screwed. Here the latter were particularly suitable, as the stepping from stone to stone for hours, and at last days, makes one expert, and it is necessary to be "light-footed." Boots become at once filled with small pebbles, at rapids, and cannot be as easily taken off, or put on, as shoes. Pantaloons should be wide and cut off just at or below the knee. Some light material (as strong jute), is preferable; and two or three pairs should be kept handy to change after each wading if wetted to the hips. I hardly need say that about eight or nine good large pockets, are indispensable, and an orderly with as many more, close at hand, who should carry shot gun, binoculars, and sketch book, &c.

The rapids up here we found far worse than those below, in M'ganto, and the whole river-bed was covered by much larger shingle, even over the tops of the wide flat islands, where in floods the water must sweep with immense force, great tree stems were piled up here and there and jammed into masses. In other places the cold weather scour had undermined the banks of shingle so far at least that the stones often rested more like a

wall, or steep slope, the slightest touch often sending large boulders rolling down, that started others in turn.

One rapid we met was particularly difficult, and took us a full hour to ascend, at another soon after, we cleared a channel where it was shallow, and so ran the canoe up a little track fully a hundred yards. These rapids at last were about four or five to the mile, and made progress slow. Later in the day we suddenly met five or six Singphu women and girls out fishing, and they gave us some they caught, begging in turn for some opium. They were from a village called Ndong not far off. This was rather a hard day's work and we camped late, *viz.*, at dusk; I issued some tea, however, which cheered them up after dinner. Just ere going to sleep we were all surprised to see two Singphus appear, with some fish; they would not stay and promised to come in the morning and take me to their village.

At dawn for a few minutes I again had a good look at the hills ere the mists covered all in, and it seems true what these people say, that the best time to see their hills is at the paddy-cutting, about November, or end of the rains.

While at breakfast the Singphus came and some of us started off inland, crossing large flats, of river formation, sand and boulders, covered by grasses, and here and there having water-courses, now dry. After a couple of miles of these island flats, we reached the land proper, though here and there we still saw boulders and bedded shingle. At last we arrived at their village of Khagam, which was a collection of more or less dilapidated sheds, on piles. Of the large "Wra Bamboo" there are several planted clumps, as usual at all Singphu villages. The people use the joints for buckets, and some I measured were 20 and 21 inches in circumference, and about 80 feet high, growing remarkably closely in the clump.

The enquiries for tobacco, (Sadr Dhopat) were here a positive nuisance, opium and tea also, they seemed to know only too well. The large number of children struck me, and I afterwards found my men had noticed it also. To all appearance there may have been six or eight to each house, and two to one compared to the grown people.

En route on we had crossed a small stream which they call the Manmo, or as we should call it Bamo, and it is named from that place in upper Burma. Passing on we came to another village called Phúp, near which I obtained the only view of the Patkai crest near the Nongyang pass. The haze was considerable, but I could see that the crest towards the east was lower than at the pass, and over it ran the Loglai hills that divide that river from the Turong. Returning to the river near Loang I found the men vainly trying to get the canoe up a bad rapid, so I decided to leave her in charge of the Gam. We therefore unloaded the boat and camped.

A very smart and intelligent young Singphu, whom I had allowed as

a favour to carry my little rifle from Phúp turned out here to be the Bishi Gam's son. He could not speak a word of Asamese, but I sent word by him that I should pass through his village next day, and should need some rice. His father is rather an influential man, not only on account of his intelligence, but from the position of his village which may be called the last on the line from Asam to Mung Kamti. Khomong at five days further on being about the half way house. This compels all travellers to buy paddy at Bishi both going and coming and thresh it out ere starting again.

While at this Loang Ghat, I had several applications from women for medicine to cure goitre, of course in such a limited time and without a special stock of Iodine, I could do very little.

At these Singphu villages I observed a cultivated variety of *Plectocomia* (the large cane); the seeds are eaten. The stem and leaf stalk is almost completely destitute of the spines generally so densely set all over both, and the midrib. Unfortunately I could not procure a single seed, though I bid well for it, nor could I get a flower as it was not the proper time.

Next morning after breakfast we packed up all our loads, handed the canoe over to the Loang Gam's charge, and started for Bishi. We passed some suties of the river from which the water had been cut off and where the villagers of Bishi were fishing. *En route* we saw some of the rice fields, and bamboo clumps, where villages of captured Asamese had been interred by the old "Dapha Gam" in former days. These Singphus used each cold season to raid Asam and carry off slaves which all ended in our expedition under Col. White (?) and the Dapha Gam's retreat, first to the Mbong yang and thence to Hukong, where his descendants now live on the Dinoi east of the Turong and Tsak tsai.

The path into Bishi from the west, is over a low spur from the Mana Bum ridge that comes down quite to the river, and a little east of the village ends in precipices, spurs from the Miao Bum also approach from the south and do the same, so that Bishi is really situated where the valley is narrowed to a sort of gorge. The village, however, is on an alluvial plateau about fifty feet high or so, and the site is open, the hills not being high.

A straight and level line edges the river on the opposite bank, and suggests a similar alluvial terrace there also; in which case it seems likely that these terraces were at one time part of a large plain. This feature appears here and there all the way on hence to the Mbong yang where it, so to speak, culminates, and is seen in situ, as a large plateau. The Gam and all his people were out at the fishing, but I was agreeably surprised to find his village quite a contrast to the others, all

the houses were in good repair, the chief's especially, there was a look of substantial prosperity about the place, and the houses were mostly in a regular row on each side of a wide sort of road, the Gam's at the eastern end. Not desiring to camp actually in the village where dogs and pigs are a nuisance, we descended east to the river, and found just enough sand to pitch the tents on in a depression of the bed now dry. In the evening I sent the guide up with a pocket flask filled, for the Gam, and a smaller one for his son, also to explain matters a little, as otherwise the visit might be unintelligible. In the morning he came down, with some of his people, and I at once saw in him the best Singphu chief I had seen so far.

He was above the average in height, and proportion, about 40 to 45 years old and held himself upright without any affected airs. Features large and strongly cut, but a quiet kindly and shrewd look, that became him as the "father" of all his people, old and young. The only difference in his clothes, being, that his were quite clear. In speaking I could see that what he said was generally to the point, and well weighed. Altogether he was by far the best sample of what a chief should be that I had met. From where we stood he pointed out on the hill just above us, the clumps of Wra bamboo growing now, that were planted by the Dapha [illegible] at his village, which was on the hill.

The difficulty of reaching Bor Kamti he explained, and confirmed what others said as to the likelihood of having snow on the passes, which all these people seem to consider a formidable obstacle. From Bishi to Dapha Pani, is usually two days, thence to Khomong (last Singphu village east) another five; from Khomong the path leaves the Dihing (or as these people call it Diyún Kha) and crossing the Songsan Bum (which I believe is a southern prolongation of Phungan Bum) reaches and goes down the "Mung lang Kha," or "Nam lang" and over other spurs to the Bor Kamti villages. Another eight or ten days, or total from Bishi to Mung Kamti about fifteen days. The path beyond Khomong he declared difficult, and said it went large part of the way up or down gullies, that practically there really was no track or path at all, the danger to a party like ours being, that if any accident occurred, we should certainly run short of provisions.

All parties going to or coming from Bor Kamti had to carry at the least ten days' provisions, and this made the journey between those places difficult to those carrying loads for sale or barter like daos.

The difficulty of transport of a Commissariat indeed we saw now ourselves, for I had to ask the Gam for three men to carry rice for us to Dapha Pani, as I calculated I should be absent from Bishi fourteen days, and get no supplies elsewhere meantime. Knowing that the Singphus and Kamtis when travelling cover great distances compared to what I should

do on a trip like this, I allowed double their time, *en route*, and for six days to camp at the Dapha Pani, total fourteen days.

The Gam and his people had an idea that Europeans cannot walk or climb, and spoke of the difficulty I should meet in surmounting Nchong Búm, that we saw lying as a ridge across the end of the valley eastward, which from Bishi, again opens out as a wide flat tract with low hills on each side. I had an idea that I could get along better than they expected but kept this to myself and was glad of it, as I thereby had a key to the difficulties of the route in other places, I here had to bargain for more rice and found that they would only take opium in exchange, at the rate of six seers rice per tola of opium, but as the local rate for opium was eight annas and twelve annas on our return, and mine was bought at 5½ I did not lose so much.

Money is thought less of, as the rubber trade enables them to earn it easily at times for Re. 1, and even, if lucky, Rs. 2 a day, and I have heard of a Naga making at the rate of Rs. 4 a day for a week.

A lot of women and girls and boys came to see the big telescope, and as it magnified to one hundred diams. (if necessary) were pretty much astonished ; the binoculars, and a smaller telescope were also in request.

The Gam was much struck with the revolver, and its range which I could shew him by firing down the river. The little M. H. Carbine also as usual was a surprise to them all.

In the afternoon I paid a short formal visit to the Gam's house, ere he went out to the people fishing. I noticed the elephant ropes or phands, hung in his roof that are occasionally used hereabouts by the Muttok Gosain. The ploughs also, four or five, were all slung up in a row so that a little smoke might help to preserve them from the attacks of insects, the Chinese cast iron socks all removed and stowed in doors. His wife was a homely and sturdy woman with no pretensions to beauty, though she was evidently a good house-keeper by the number of hens, and their nests I saw, and the various odds and ends I could see from the outer compartment, beyond which I did not go. The total length of the house might be 90 or 100 feet by 30 and divided into many compartments in which the various members of the one family live ; a strapping big daughter was married to a Singphu who lives with them, and who was nursing a youngster. The Gam's brother lives in the next house, also a good one.

Having arranged regarding the rice, some vegetables, and three men extra, also about leaving a few of my boxes, with stores for the return journey, in the Gam's charge, we went down to camp again, I had a long talk with an old man who spoke Asamese. Next morning after weighing out the rice and tying it up, settling the loads which the Singphus shirked (as usual), issuing a little tobacco to the ladies, old and young, who came to

see us off we made a start. I noticed the Gam go round to each of the four men who went with us, and give him a little screw of tobacco and wish him luck. The men with loads at once waded, but an unloaded man would hardly have got across that way as the stream was so strong and waist deep. I and the servant and guide crossed on a bamboo raft, kept here on purpose.

On the off side is a large flat chur quite open and used for grazing cattle on, a small offshoot of Bishi called "Pen gaon" being on the southern terrace flat, as Bishi, is on the north one; on the map it is marked Kasan, and in Wilcox, Kusan, which the people did not seem to recognize, until my guide pointed out that they were of the Kasan Singphu clan. Passing the cultivation to the east, we emerged suddenly at the steep edge of this alluvial terrace, from whence the view is very good, as it overlooks the valley for some distance and shews the hills beyond well. The bottom of the valley was a wide shingle flat, here and there cut up by water-courses mostly now dry, and with scattered rather irregular forest, the hills at the flanks being very low. The valley which is constricted at Bishi, by hills coming down on each side now opens out and is about eight or nine miles long by one or two broad, the wooded hills on the right (to south) rising pretty steadily to Wahambo and Langu búm, as shewn in Col. Woodthorpe's map, which is careful in detail. After passing the Kachong and the opening to north where the Pakan comes out, we camped, where there was firewood, at an old shanty built by rubber cutters, and were soon all housed. Had we started early, we could easily have reached the Nchong Búm, as I afterwards found out, *i. e.*, the usual march from Bishi. But as I was out as much for pleasure and health as anything, I did not attempt to force the pace, or camp at certain defined spots at all risks; besides I always made it a rule to camp early if possible, *i. e.*, while there was an hour's sunlight, at least. While at dinner we were all surprised to hear a gun go off about a mile away, so after an interval of about a minute I fired my carbine, as reply, and to invite the other party over. No one appeared but as they turned out to be Mishmis, (probably after elephant) it is likely enough we were examined after dark.

In the morning at 9 A. M. the air was 66° and the wind as usual from the E. N. E. and we had a beautiful day. We soon came across the Mishmis, three men, two girls, and a Singphu son of the Dungon la. While the guide was talking to them, one of our Singphus pointed out where there was a lake up in the hills, which he saw when searching for rubber two years ago with five other men, on Langu búm. The summit of one of these hills they found quite inaccessible, though from below it did not seem particularly steep. At the extremity of the valley where the path crosses the river, we had to wade, the Singphus at once stripping and tying their

few clothes in their huras, or baskets. After all were in, I saw that where shallowest, the stream was strongest, so I took a middle course. The nails or rather *screw* heads in my shoes, were very useful as the stones were so large and slippery; a stick was indispensible, not put in down-stream though, to save one going that way, but up-stream to lean on; in fact, if put down-stream it could not easily be forced to the bottom, whereas up-stream the moment it touched the water, it went to the bottom "like a shot" and stuck there, if put in at an angle. The water was up to our hips, and only one man, my little Kachari Bhodai, had to be assisted. After a short distance we came to another rapid that had to be forded, a very ugly one below, where the water all rushed close under precipitous rocks, neither I nor the guide were then aware that really there was no need to cross at all, so we all went in for it. I, however, made the Singphus go over first and then return to assist if needed, and having donned my swimming belt as a precaution, walked in.

At first it seemed all right, but the boulders were such a size in some places, two and three or more feet across, that they caused eddies, and in turning to avoid one in front of which the stream had scooped a hole about four feet deep, I was suddenly aware that I had stuck and hung poised as it were a moment.

Sideways I had got on all right but the increased resistance in facing the stream three to four feet deep made a difference. Nden gam a powerful young Singphu, accustomed to all this, at once came towards me, but I managed to get on, and pointed him to little Bhodai behind, whom he took in hand just in time, as his load had touched the water, (and wet all my clothes), as they all said again, "loaded people get on best, as they have more hold of the bottom."

Each person took about five or six minutes to cross, and in this case I went in at times to the waist. We were now close under a pretty high hill and a strong cold wind blowing made us pretty cold, but we pushed on, and came to where the Dungan Kha falls in from the north, and the Dibing emerges from the south-east between the hills, in a gorge. The place is called Dungan yup.* Here we discovered that if we attempted the ascent of N'chong búm that day, we should again at once have to cross at another bad ford, so rather than do this and to give time to dry clothes I camped. We had, however, not selected a good site. It was all right in fair weather, but after an early dinner it clouded over and we heard thunder, our tents were pitched on the sand, in the middle of the gorge with high hills on each side, and seeing this I had the edges of the tent sunk some 6" in the sand all around, and good large stones piled in a row all around outside; lashings all doubled and some branches held to wind-

* Yup in Singphu "sleep," a resting-place.

ward by stones, to break the force of the wind which now began to rise. It was hardly dark ere the storm broke. The thunder rolled and roared as it only can in the tropics, and the lightning played here and there as a constant flickering blaze. Rain fell as heavily as it well could, but my water-proof was lashed taught outside, and though I hardly expected it, I rode out the storm which lasted some three hours, without getting wet. The men though they had a large water-proof got wet gradually, and in the early morning at dawn, I got up and donning my great coat (which I never needed so much in my life before) I got in some logs and tried to start a fire. It was, however, useless as the wind was a perfect hurricane, blew all but the big logs clean away and I had to start and build a low stone wall of big stones, to windward. By filling the larger holes with sods, I at last got shelter enough to try again, and arranged the firewood and logs, ere I struck a light; by using up half a candle I got it caught at last, and it soon was a fine blaze. I looked in and saw the men asleep still and roused them, I made my servant issue tea for a big brew, that soon put all square; such wind, however, they all never experienced before. The guide, four Singphus and Thang, as soon as they saw the storm coming, ran from their bivouac near us, and made for a couple of big holes in the bank under the stem and among the roots of a huge tree; where, at five feet from the ground, they crawled in and lay all night in fear of the tree falling, in which case all were at once dead men. Old Lutak said he had not closed his eyes once, and he certainly looked like it. It was some time ere the driving clouds, down the gorge, allowed the sun to come out, and meantime we had breakfast. By this time we spied men in a shanty on the opposite bank but could not be heard as the rapid was in the way, yesterday on our arrival here I forgot to say we came up just as two Singphu men and one woman, emerged from the same ford, and reported it waist deep, the two men came up wet and shivering and the young woman soon after, shivering certainly but not wet which was a mystery, and after a talk they started on for Bishi, we now discussed the passage, and the men opposite beckoned us to go upstream. Nden Gam volunteered to shew us an alternative track. By going up some distance on the west side and scrambling on the rocks at side, we came to a place where a huge tree stem lay out in the stream and off it he stepped into water not more than two feet deep and took an oblique line to where the men opposite stood, and we crossed easily.

There was here some more discussion as to the proper route, and eventually it was settled that the old direct route over the hill was too steep for the loads, and in lieu of it we were taken along the most execrable track I ever saw. At times we had all to help each other up places steep as

a ladder, partly by rocks and by roots, or down to the river. In two places we had to wade along the crest of a narrow shingle ledge in the centre of the stream and deep blue water on either hand.

Suddenly we came across the shanty and stores of men out for rubber, but the only thing taken was a light for a pipe. Here while halting a few minutes to give the weaker men breath, I could not help admiring the gorge and wishing I had my Rob Roy. The river was flowing though very sluggishly through a sort of rift or chasm in the hills, and in the bed at the sides were huge rocks. The sides of the gorge had jungle in every nook and cranny and its rockiness did not look so conspicuous. At every few hundred yards, there was material for a really fine picture, up-stream or down. On starting up, we took to a gully and it led up—up till our legs ached. Progress was very slow, at last after about half an hour's climb we came to where there was a small ledge of soil, about 12 feet × 8 or 10, and a spring. The Singphus were for stopping as they said we should get no more water that day or night, and when I insisted on going on they filled bamboo tubes. This was rather too good, so I told my men to follow me and fill their *stomachs*, and proceed. It turned out that the track above certainly was steep, indeed it was a case of holding one's breath now and then, but by going at it steadily we got on, and at last the track got more level, and then quite so, and as I guessed we began to descend. Two of the Singphus now went on ahead, and I soon pointed out to the guide where we could have got water down a gully. At last we espied the valley below and listened and heard the rush of the river, so pushed on down at as rapid a pace as possible, and at dusk emerged off a flat ledge on to the river. After marking the track by paper, we crossed a little knoll, and found the remains of an old camp at a cliff overhung by a rubber tree. As a large rock of some eight or ten tons had fallen on and collapsed the former hut, we voted it best to camp to one side, and finding bamboos handy, the men were soon housed. The two Singphus who had gone ahead now turned up with two large fish (mahseer) which they had netted, and came in very handy. Here again I issued a little tea all round, and we soon got to sleep. In the morning we were all surprised to find the little branch of the river that ran beside us the night before clean gone. While having a wash at the rapid not far off, I could not help every now and then remarking a deep-toned noise or ring coming from the water, I had heard this noise before in Disang at a rapid and could not make it out. It was not regular, but occurred now and then. At last I concluded it was caused by very large boulders, poised in such a way that an extra rush of water overset them against another rock down-stream, and the concussion was the sound I heard. The boulder falling back again so soon as the extra rush was somewhat abated, repeated the sound. Just above

our camp site up-stream I was shown a conical wooded island called "Khomong morang" said to be one solid block of stone? To the south lay a wooded hill called "Kumtsai kú" (*lit.* sand hill) and by degrees we emerged from a pent-up gorge, to a wide and flat open valley running east and with low hills along the flanks. Here and there to the south, I noticed horizontal lines in the forest, at about (as far as I can recollect) 100 and 150 feet up, evidently wooded flat terraces.

In some places the edge had fallen away and shewed a clay and sand formation with *bedded water-worn stones* large and small, as though the whole valley had once been filled up with this, ere the river cut down to its present level, through the gorge we had passed. Presently we came to the hut of some men out rubber cutting, who also had killed an elephant. The usual bamboo pole and conical receptacles for offerings to the Nats, was stuck up and the tail and one foot attached; a little way off was a rough platform covered with great lumps of meat being smoke-dried. I had to stand to windward while some of the Singphus selected tit-bits in exchange for opium. As the great irregular lumps of blackened flesh, were fingered, and pawed about, and nodded over, at this jungli "exchange," I couldn't help noticing that some of them looked quite as intelligent, as their owner's face. Away all around behind him, what a view! one fit for heaven more than this earth; yet this smoke-dried old fellow, though brought up there, had probably never seen it. Had passed through life as an intelligent vegetable.

In about an hour after we met two Singphus, one with a gun, and in answer, to the query "where from," the eldest replied "Khomong," which I much doubted, seeing no trace of bag or baggage; eventually after hearing that I was *not* a Government officer come to haul him up for elephant shooting, he admitted he was a rubber-cutter, out shikaring. I had guessed something of the sort as he came up (with a conspicuous swagger, about the legs).

Soon we noticed an extremely level spur from the north, around which they said the path and river lay, it became gradually quite a conspicuous feature; clouds, however, had covered in most of the ranges behind. At last rounding this spur, we came out on the Dapha Pani and a very wide grassy flat valley extending some miles towards the north and bounded on the west by the spur abovenamed, while to the east extended all along the side running north and south a *very remarkable level and straight cliff*, alluded to by Wilcox when passing there in 1827. It was so level and straight as to be more like a huge railway embankment, and at a short distance behind could be seen another. They extended thus for some miles. We passed across the open level of the valley bottom, which was all burnt *ulu* grass, and had stones and boulders rounded and polished

sticking out of the turf everywhere, coming to the river which flowed along the eastern side. Here at the mouth of the Dapha Pani near its junction with the Dihing or Diyunkha, we pitched our camp, and got in plenty of firewood as both elephant and buffalo was reported about, and the tracks seen.

Here though fairly close to Dapha Búm, I still observed the wind to be south-west and north-east watching for the clouds to pass off the crest of the ridges in vain, until twilight, when I saw that the peaks had as yet comparatively little snow on them. I had only a few minutes left to examine the higher ridges with a high power to see how far they were bare or covered by vegetation. In the very early dawn and until sunrise I again was able to see the summits, but for very short time only, as mists came out below, all over the valley, and when these had cleared off below, the hills were all clouded over. I therefore determined to go up the valley and have a look round generally wherever possible. The old Kamti and I took "Kumku nong" with us, as he knew the place somewhat. He was one of our loadmen, and the wonder to all was, how, with such thin legs, he could carry his load and walk as far and fast as the best of us. One good feature about him was, that there was generally some information to be got from him, and at the least, he had a joke and a grin, always ready. In former times when a strong young man, ere he had small-pox—he had been up the Dapha Pani hunting—as far as the water parting towards the north-east up the "Shi kha." He described it as having jungle more or less everywhere, with tracks and paths, but not a nice country to have to push through rapidly as in travelling, in consequence of the frequent detours necessary to avoid impassable gullies &c. Otherwise as a place to quietly camp and shikar about in, it was all right, if one had some rice, for there was a good deal of game, among which on the upper ridges there was "Takin."

As we went up the valley the signs of erosion and deposit were very conspicuous all round. Our progress except for a few yards here and there, was at first entirely over large rounded stones, and the stepping from stone to stone for an hour or so on end, is monotonous. At last we spied smoke, and then saw two men watching us from our left, Miju Mishmis as it turned out, and we at once hailed. They said they had seen the smoke of our camp, and were going to see who we were, and to examine their fish traps. One of them had a fine cross bow, the other a long and beautifully made Mishmi spear. Both had the regular Mishmi basket, or haversack, that lies in the small of the back and is usually covered with bear or monkey skin. We looked into their cunningly made hut as we passed; a wild animal would hardly notice it, being part and parcel of a great snag or drifted tree, stem and roots, with stones and turf added. Thence we went along in

the *ulu* grass, on one of the many flats on which here and there a few small trees grew, but our course all the time was northward up the valley, and parallel to the river, which in an endless series of roaring rapids, winds and twists down the eastern side of the valley at, or near, the peculiar cliff that borders it all along, on the east. At the mouth, the Dapha Pani valley may be a mile and half wide, and the length 7 or 8, the entire floor being a flat, covered by *ulu* grass, and a few scattered trees, among which water channels, lined with rounded boulders and stones, meander. One could gallop on horseback almost anywhere, as far at least as the jungle was concerned, though the great (and small) rounded boulders projecting from the burnt turf, and in the grass, would not be nice to fall on. After going about five miles and still not coming to the end of the east cliff I sat down, and had a good look at it all along, with the binoculars, at the distance of about half a mile. From what Kumku nong said, there is only one passage up to the plateau above, in the whole length of about seven miles, and the top is perfectly flat and level to the foot of the second cliff, and thence flat again for a long way in, the entire plateau being called the "Mbong Yang." The edge of the cliff being perfectly level and straight for such a distance gives an extraordinary importance to it in the view, even though it is wooded all along the edge at the top and for part of the way up from below, all over the talus, which extends the whole way also. The upper half is precipitous and though here and there ferns and creepers hold on, large portions are quite bare and red, showing the clay and rounded boulders of which it is composed (for the upper half at least). Towards our camp where the river is cutting the base of this cliff, the lower third of the height is of vertically bedded clay slate and shale, the upper part as before of clay with bedded *rolled* boulders.

The height of the cliff I here estimated at 200 feet. We returned along the western edge of the valley where the land seems to rise a little in wide flat benches, five or six feet at a time, towards the range along the western flank, which is tolerably level in the main, but not so conspicuously so; at the east cliff the benches also are not regular, altogether it looks as though the land had once been continuous between the western spur and crest of the east cliff, and that the whole Dapha Pani valley had been slowly cut out to its present depth. Among the boulders as we returned I found a fine rounded block of hornblend porphyry weighing about 100lbs. and had great difficulty in breaking it, so as to get a specimen. Though the Singphus and Mishmis see so many thousands every day, they all declared they had never seen that kind of stone before. One feature of the Dapha Pani that struck me, was, the great variety of colour, in the bed, due to the extremely clear water; the natural colour of the rocks (all more or less smooth and rolled) was brought out conspicuously as though they were

varnished. As far as I could see, none of those in the bed were in situ, even though often of large size. I had great difficulty in getting up on one monster of gneiss, which measured about 40 feet × 20′ × perhaps 15 or 16 and was one solid irregularly rounded mass, partly in the river, and some way from the cliff, and though it projected some ten feet above the water on the up-stream side, there was a deep blue basin of rushing water in front of it. Blocks of the size of a hogshead were common, everywhere in the bed, and on the bare shingle flats the size was less. Evidently the river has a rapid fall, and in the rains the floods must be heavy and violent, extending all across the valley except perhaps here and there on the flat ledges. Only a small proportion of the boulders were sandstone, most were of gneiss, and granitic, though none of pure granite; apparently serpentine and trap constituted a large percentage, also chlorite, and metamorphic conglomerate. The evening gradually clouded over, and in the night a little rain fell. Next morning was foggy until about 10 A. M., when I started to ascend the hill south of the valley mouth, to get a good view over the Mbong yang. We had to wade the river, and found the face of the hill near the bank, so precipitous that it was some time ere we got a place to climb up; I selected where there had been a landslip, as it had cleared the face of the hill of the forest and vegetation that otherwise would be in the way. We found it no easy job to get up and not very safe, as now and then, a stone slipped and bounded past, rather too close to be pleasant. At about 200 feet up, I halted, as it seemed both difficult and dangerous. An accident to any one would have been highly inconvenient, and after a good survey of the valley and making a few sketches we came down and re-crossed to camp, where I found some eight Miju Mishmis, the most striking feature as we approached, being their large crossbows.

I now heard from "Kreng sha," the one we had met before, that a colony of them had come over this year from the "Kamlang" and also I believe the Teng kha, north-west, and intended to settle permanently near the Dapha Pani, and up the Inké which falls into the Dapha Pani from the north-west having their jums on the spurs at the western head of the valley. This I was glad to hear, and told them so, as it would tend to render travelling much easier if supplies could be got from villages all along. They asked many questions, on various topics, such as the price of rubber, and if I thought they were being badly cheated by the dealers, &c. In return I also made numerous enquiries, as to routes, animals, the forests, &c.

None of them any more than Singphus seemed to recognize the name of Dapha Búm which is seen on our new maps as "Mai thai Dong," all shook their heads and had never heard such a name, their's being for central

highest cone "Wa-thong," a summit to the south-west "Kambro," and the continuation of it "Kunjong."

A conspicuous double peak on the snowed ridge going east, they called "Taiyún." None of them had been to the east of Wathong, and described the routes there as difficult and over snow. A party had come over probably from Bor Kamti valley, some years ago and two of the men had to be carried in, having lost their feet through warming them at a fire when frost-bitten. No one seemed to know that hard rubbing with snow might save a limb, and I described the process. As we sat talking, the clouds moved off, and we had for the rest of the day a fine view of all the hills. A peculiar persistent grey green shade, all over the lower part of Kun jong had struck me for some time as contrasting with the upper part of the same. I had attributed it to cloud-shadow, and the upper yellowish brown, to sunshine, but as it remained there after all cloud had gone, I at once saw it was caused by some change in the vegetation.

On enquiry it turned out that the yellow ochre colour was caused by dry grass and a small bamboo, called by them "Shu mu," the leaves of which turn yellowish. It grows in scattered clumps all over the hills at a certain elevation, with and above the belt of firs.

This belt could be well seen in the large telescopes and the individual trees, their branches, tufted heads, and shadows could be even distinguished. As usual with fir trees, they grew often up the steep ridges, and gullies, or ran in a line up the shady southern side of a ridge, among the snow fields, and had it all to themselves, barring the "Shu mu" little bamboo, and grasses. The takin is partial to this region, and difficult to shoot from its wariness and agility. They also report the elephant as wandering up as far as the snow at times, say 10,000 feet or more. Musk-deer and yak also reported.

The crossbows these men had, were very powerful, 5 feet long, though the stock was small, and light as possible (barely long enough for the short arrows) and had the ordinary crossbow trigger of bone. Arrows plain, and poisoned with aconite, were carried in a small tube of bamboo about 18″ × 2″ with a worked cover to slip on, the quiver tube being carried under the left arm and breast, cap upwards, handy. I was surprised to see no regular dao such as other tribes use, and in lieu of it they use the small nearly straight and pointed knife carried on a sheath or in one. The spears were beauties, heads well made and strong, the shaft of caryota stem or nahar wood, and the spike a foot long and thin, but strong also. Most had the basket covered by some skin, worn in the hollow of the back, the suspenders going a-la-knapsack over each shoulder, and hitched in front by the bone fastening, which fastening is noteworthy for its simplicity.

Ere leaving, one of them gave me a little knife such as they use to cut their Sali with, and in return I gave several of them little tin boxes with beads of various kinds, and bugles. Of course the guns and telescopes were sources of wonderment as usual, and they went away after giving me an invite to their future village, if I again came this way. The evening brought one of the grandest sights I ever saw in my life. The gorgeous effect of the sunset on the hills, and the snows especially, was simply indescribable. It was heightened by the contrast of the intense blue-greens, blues, and purple, of the lower ranges as they passed into shade, while the upper snow covered ridges and peaks were in a blaze of pink and golden sunlight. The sky behind being a clear and pale emerald green grey. The Asamese who were eating their dinner, came and stared at it, and variously expressed their admiration of a "snow mountain," which till now they had none of them seen. The snowed peaks retained for some time, a clear grey light that enabled the telescope to be used on them, long after all detail in the valley was merged in darkness. At night we heard a tiger hunting over the plain, and also elephants first to the north-west and then north-east and next day saw where they had ascended the Mbong yang plateau near where the cliff ends, close to us.

To-day at 9 A. M. I found the water boil at 210·10 by two tubes of B. P. thermometer, the air being 56° and we had fog till about 10 A. M. It is a pity there is no good site near for a camp opposite the mouth of the valley at 400 or 500 feet up as we should then see the hills over the fog. "Kumku nong" says that eight years ago, he was up east of Dapha Bum, near Mailam Bum, and camped for some ten days at a flat called "Mailam yang," which the others had heard of. By his account it is a high and comparatively flat tract, at the head waters of the Shi kha and near a route, from Bramakhund side to the Mung lang and Bor Kamti Shans and Kunungs, called the "Noi kong-isong" bat. He places this tableland (not large) at east-north-east of Dapha Bum.

If this be plotted on M. Desgodin's map, (Pro. A. S. B., 1880, Litho. 1881,) it should fall uncommonly near the boundary of Djrouba, the south-west corner of the boundary of eastern Tibet, which is there placed in the corner between the upper tributaries of the Mli kha branch of the Irrawadi; and the Brahmaputra (a little north of the Gulm thi).

I had (so far) considered the range encircling the Mli kha valley on the north, as very high and ending in the peak called Nam yen, (on Wilcox's map) and as an impassable barrier, with some high peaks rising perhaps to 20,000 feet on it.

If, however, it turns out (as it now seems likely) that the Mli kha, where these "Kunungs" live, drains the southern edge of a high plateau around which there is probably a range, it may be true what one of the

Kununga told me, *i. e.*, that he had travelled northward and gone into Tibet for a short distance, that there *was* a route, though difficult, and few travelled on it.

He also stated that there were routes between the Mli kha and Brahmaputra on the one side west, and (though none north-east) others existed over the ranges to the east, going to the Disang or Sang kha, on which also Kununga resided, and thence east towards China.

Until these tracts are examined it will not be possible to say whether or no this "Mailam yang" is a prolongation of the "Djrouba plateau" or not.

While looking at a snow field this morning I was surprised to see very clearly the tracks of two avalanches, distinctly marked out, as long curved depressions having a ridge thrown up at the sides, and the snow piled at the bottom, one of them was about 1,000 to 1,500 feet in length; neither were there the day we had come.

The colour of the rock forming the crest and peaks that appeared where there was no snow, was a dark "purple grey." In the early morning ere the fogs arose and when the air was at times very steady, I could put on the telescope, a power of 300 (diameters). This enabled me to get as it were close to the summits and see detail with no exertion. Though the distance was 16 miles I could detect easily the sharp outlines of the rock, even the larger fractures or cracks, but no trace of vegetation. The first seen appeared to be grass, after which there are two kinds of bamboo, at least so the Mishmis say.

From all I could learn I might by now have reached Khomong the Singphu village on Dihing towards Bor Kamti at four or five days from Bishi and three from here, but I was told the journey was almost precisely like the part already travelled over, if anything more fatiguing; and that when at Khomong, I should see the usual dilapidated Singphu sheds, and learn very little more than I already knew. This might be partly true, but I still wished I could have gone on, the fact was that I had already pretty nigh exhausted the little stock of presents I brought, and to go empty handed, where if anywhere, presents are *de rigeur*, might not be good introduction, or conduce to future success in these quarters, so I perforce made all the enquiries I could, here and elsewhere as to what lay beyond. The Phungan or Bongan ridges that stretch away south from the eastern end of the Dapha group I saw from several places, and from the western edge of the Dapha valley, up a tall tree I had a good view, and found them pretty heavily snowed. The route to the north of these hills and over the saddle between them and the Dapha by which Wilcox crossed is called I am told the "Tsau rang" bat, and not now used as it is more difficult than the one round the south end of Wanglo, over a ridge

called Song san Búm. There are now no villages between Dapha Pani and Khomong as there were in the year 1827, though the sites are known ; at the same time Wilcox's names are not always spelt correctly, for instance, his Koom koor, I saw the site of and it is Kum ku. (Ku is hill in Singphu.) Kum ku was in fact the name of one of my men, who had been born here, ere the village was removed to the Kam lang, and part of this village I hear is about to return to its old site again, under the old chief's son, (whom we had met with the five Mishmis, near the Dungan). Again Willcox's "Puseelah" just east of the Dapha múk, is intended for "Bisa la." (= Secondary Bisa), Oglok is correct but the village gone.

His "Insoong" is intended for Nchong. There are also no large villages of the Muluk tribe where he has them unless it be the *one* of Khomong Singphus. Next day I determined to shift camp to the western side of the valley ere returning viâ the Nchong Bum route, so as to avoid the gorge. We therefore packed up in the morning after breakfast, and I directed the men to go about four miles up the valley and camp on the west side, while I and the guide, Nden gam and Uren nong, started up the Dihing for a mile or so and proposed crossing the Mbong yang plateau, coming down by the only outlet known, and so across to camp. in the afternoon. After seeing all the loads tied up, we waded the Dapha—not a nice job at the mouth where the stream was strong and the stones large ; the Singphus were up to their waists, so I selected a place where there appeared to be a line of big stones and stepped from one to the other, to reach each, however I had to make the attempt to step a foot too far up-stream, even then I was up to the hips, at last one of the boulders rolled over, and I went in, but was out again ere my note book got wet inside. About half a mile up-stream, we spied some Singphu rubber-cutters, on the off-bank, and saw another trophy and remains of elephant and deer, tied to it ; Nden gam here pointed out the mahseer, literally and truly paving the bottom of the river, there must have been hundreds, (probably thousands,) from two to three feet long, though obliquely through the water they seemed only about a couple of inches deep.

In about half an hour after we ascended where a great rock barred our passage on the north side (or Bank of Diyun) and reached the top of the plateau after a little roundabout climbing and over undulating land.

Once on the top we found it remarkably flat, and tolerably free from jungle ; it had been largely trampled down by elephants. The forest was very second-rate, few or no large timbers or straight. Some way in we came across two small burial mounds that belonged to the former village of "Bisa la ;" the course lay on straight for the upper end of the Dapha valley, and as far as I could see the land everywhere was practically quite flat and had large rounded boulders embedded. At last we saw light

ahead, and expected to look over, and see the Dapha, but were all surprised to find we had been on the second terrace all the time, and now overlooked the lowest one bordering the valley ; at the edge we found traces of a village in more burial mounds with a ditch around. Descending the slope which was at about an angle of 45° we could easily see the rounded boulders *in situ* in the sandy loam or clay (none angular). At foot of the slope, which might be 100 feet high, we came out on a sort of flat swamp or where peat and mud rested on sand and stones. Passing on we were probably an hour ere we again saw daylight ahead, and knew we were approaching the cliff, ere reaching which, we heard the rapids below.

We had come obliquely and now made straight for the edge, the men getting fits all the way from the Hingory-seed spines. Coming out at last and looking over, we were all astonished at the height, instead of about 200 feet it looked more like 400, and cautiously looking down while holding a sapling I involuntarily drew back, as I could not see the cliff face at all, and seemed to be standing out on a ledge. The old Kamti kept back some distance, and "felt as if something was pulling him over," I got to another place and lay down and thus looking over, could see the face of the cliff, pretty clean for some 80 or 100 feet down, after which ferns and such grew, then creepers and grasses, shrubs and saplings. Tree tops often touched the cliff face below. To get down was now the difficulty, "Nong" who alone knew the place, I had to send back, ere this, to the Dapha múkh, where we waded, as my belt and keys were dropped there, and now we had to trust to our wits. There was but one passage down we all knew, so we worked south along the edge. Animals go up and down this path, so we kept a sharp look out for tracks. While going thus, we were suddenly started by a loud deep growl or rumble, and saw the jungle moving, at once all called out "magui," (elephant) and Lutak saw it, so we moved on as quietly and rapidly as we could, and were glad to get past such a very awkward enemy in such an awkward situation. I was hardly prepared to find it literally true that there was no chance of getting down except at this one rift, but so it turned out, and we went on and on, till at last tracks were found to form a path or *puti*, and then out we came to where many of these converged at the mouth of a very small gully, wide enough for one at a time to enter. Here we rested and ate our lunch, and I had time to ask as to the singular feature we saw here and there, where huge Hingori trees had fallen over eastwards, at the verge of the precipice, in all cases the roots being at the *very edge*, and the stem lying in at right angles, (and none oblique), for some time it was not obvious, but at last we saw it was caused by the loss of root-anchorage on the precipice edge, and that the "Nor-westers" could thus overturn the larger trees pretty easily in consequence—the regularity of the phenomena was remarkable. The

entire Mbong yang plateau seemed covered by Hingori (*castenopsis*) and this was the great feature also of the plateau on the western flank of the Dapha valley. Ere going down I asked Nden gam to point out any traces he saw of human habitation, as it must have been once a carefully guarded point, in the old and unruly days of the Dapha Gam. Our troops indeed had to fight their way by this same gut. On looking about he at once pointed out, first a small circular burial mound and ditch twenty yards south-east of the entrance of path ; secondly, a good many large trees called Modar, *Erythrina Indica*, planted to train pan on, these and the planted Wra bambú indicated a village site.

I also measured the height of cliff approximately by dropping heavy green sticks and hard lumps of clay, also stone, and counting the pulsations ere they reached the bottom, or talus, the average being six beats.

Before starting down I left my mark, in the shape of two bullets fired into a morhal, *Vatica lancifolia* or copal varnish tree, close to the mouth of pass on the south at four feet from ground.

The animals that frequent this plateau, and pass up or down, I had one means of ascertaining at this pass or gully, and carefully watched and recorded all tracks as we went down, meeting elephant, buffalo, sambur, horina, and huguri, deer, tiger, monkey, pig, cats, and what seemed wild dog. But no bear. Some way on, the path forks, becoming tolerably easy, and near the bottom we came to a coal seam, and shales, bedded at high angles. The upper part of the cliff was composed of clay, with water-worn stones and boulders embedded. From the edge we had a fine view of, and across the valley below, where we could see the Dapha Pani all along as a series of foaming rapids, and even hear it if we stood still ; away on the other side of it the bottom of the valley was like a plain of grass, with scattered trees. It had been set on fire by the Mishmis, and was burning in large patches. On the other parts left black and smoking, we now and then caught sight of the men of our own party as little pigmies, moving along in Indian file to the new camp.

Looking across the valley to the western plateau, and realizing that the little stream below had slowly eroded it, one had an impressive lesson in geological time. The sun was now getting towards the West, and warned us to start on, for where the camp was, we as yet did not know.

On reaching the bottom, the river was close, and we forded it, also two other branches further, all swift but none deep. Nden gam, though a remarkably fine and strong young fellow, was a great opium-smoker, and he at once went ahead for the Mishmi hut, we had before seen, to get a light, and bamboo tube. Lutak and I followed at our leisure, and at one place passed the body of a python, seventeen feet long, that had been caught by the fire among the grass and burnt to death. Soon after, we heard a

man shouting and it turned out to be Kumkú nong looking for us, and ot say the camp was pitched more to the south, so we had to turn and retrace our now weary steps, and at last at dusk got in, all of us three very tired. Luckily everything was as I could wish, and dinner ready—soup nice and hot, and I soon felt better. As I was at dinner, we heard a most peculiar noise (in the air seemingly) that gradually got louder and louder, and at last we realized it as an enormous flock of Hornbills, (the large Huang Sorai).

Neither I nor the Asamese had ever seen more than at most twenty or ay twenty-five in one flock before, and yet here they were in hundreds—ev dently they had intended to roost in the tall bor tree (fig) we were cam ed under, and all suddenly sheered off as soon as they saw our lights and smoke, settling a little way on. I tried stalking very quietly, but no use, this very particularly wary bird, or hundreds rather, was not to be caught, and they all suddenly and simultaneously flew, with a deafening noise. Ere I got off to sleep, which I did pretty early, I heard "old Kamti" at his gabbling sing-song prayers, mental sort of "prayer wheel," as far as the real devotion seemed concerned. If addressed to me, I certainly should not have blessed him, more likely the opposite. He went in for them pretty regularly at night, all in Burmese, as he was a good Shan-Buddhist, and finished off with the usual invocatory "Om, om."

At night we had a severe yet comical scare. The Singphus (even old Thang included) insisted that there was danger from wild elephants, and half-felled lots of young trees and saplings all about, so that the fall of them should give us all notice if anything came too near, they had also selected the bor tree as good to swarm up in emergency and notched the trunk and ribs ready. About midnight I was startled clear out of bed and tent, (with revolver in hand) by the hubbub, indeed the smash of a tree first roused me. In an instant every one was up and running about, and the cry was "hati," "magui," and as I at once fired, *something* went off to the right, a shot from the carbine made it go on again, and then all was quiet, and we listened, some said hati, the Singphus magui, and while one of the Asamese suggested what I also thought, *i. e.*, samber, suddenly we were yelled to from *above*, and looking up in the revived firelight, discovered master "Sin-neng-gam," the young Singphu, hanging helpless over the said fire, unable to go up or down, and probably twenty-five feet up. The sight so convulsed everybody, that for the instant he was left there, but Nden gam soon went up to the rescue (no easy matter though) and when Sin-neng was got down, and came round a bit, he found he had no recollection of going up at all, said he must have done it in his sleep!

The shrieks of laughter this induced from my fellows, were enough to keep any wild animal away all night. Between one Singphu being so literally

"treed," and the others shouting me to shoot, to *frighten away a deer*, it lasted as a joke some time. Next morning my fellows sure enough found it was a "hor pohu," samber. At the same time there could be no mistake that immense numbers of elephants must pretty frequently be all over the place; it was, as one Singphu said, all "hati gaon." About 10 A. M. we started to find the return path that led over the west plateau and the saddle between Nchong Búm and Joithó, we were hours at it, and came again and again out at the same place; at last going up the spurs towards the Mishmi jums, where after about two hours, we emerged, and found them all clearing the jungle.

These Mishmis do not cut and slash so vigorously as the Nagas when clearing, but go to work quietly with their small knife daos, and get through a great deal quickly, I noticed that they left a great deal, such as bamboo clump stems standing, that Nagas would have cut, but they pile small stuff about them, and when dry the fire does the rest of the work for them. Looking at their work from a prehistoric point of view, I could well imagine that a very small cutting implement aided by fire, could really make extensive clearings, for if the fires are made around the larger tree stems, it soon kills them, and in about three to four days the whole of the foliage is dead, and in a week is ankle deep all around underneath, and the *shade has disappeared.*

The study of the dao is worth pursuing, and might be expected to yield some results (so far unknown to us) regarding the stone age here, there are many forms more or less serial, and related to the Asamese "Pat kutar" (lit. leaf-axe) and the Andaman p. axe. Both are forms that could be closely imitated in stone. Illustrations of a few are given hereafter. Celts also are found all over the hills during juming, but regarded with superstitious awe. At several places as we came along we found large clumps of the planted Ura bamboo, indicating old Singphu village sites, and at one place in particular where Wilcox places Koom kur near the upper edge of the western plateau, saw as many as five or six large mounds, say forty feet across and six high, around which large ditches were dug leaving as usual at four opposite places, little causeways to cross by, most of these mounds had bamboo clumps on them.

It was now past midday and we had only just found the entrance to the path on the plateau above, I had upbraided the Singphus and "Uren nong" especially whom the Bishi Gam had given me as guide and a safe man. It now turned out that it was about ten or twelve years since he had been by this path, and the country was so trampled about everywhere by wild elephants that he continually lost the track. Every now and then we had all to sit down while he and his men scouted around to find it, and from the edge of the plateau on the west overlooking the Dapha valley I

had several good views, not only down on, and along the same, but over the Mbong yang plateau beyond, to the east. The long level cliff was very conspicuous, wooded to the very edge, and the second line of cliff behind, which was more pronounced on its northern extremity towards the Dapha group, and where the plateau was also bounded by another cliff, not quite so regular.

Some distance beyond the second terrace to the east a third was visible, and beyond all, far off another much higher and also flat-topped. The southern end of which was broken up, and at last consisted of a few isolated low hills, rising above the lower level.

They report the Mbong yang plateau altogether to be a good day's march from east to west. From here also, the continuation of the Dapha group eastwards was well seen, ending a long way east-south-east, in the Phungan ridges, snow covered, and which (in the view) closed up to hills along the south side of Dihing and distinct from Patkai (which was behind) and not now visible, though I constantly endeavoured to see it.

The ridges and flats west of Dapha do not appear at all regular, at least we several times had pretty stiff climbing among spurs and gullies, eventually, however, we came to where the land for a long way was very level, and the path well defined, and here, as on the "Mbong yang" the Hingori tree so predominated that the spined seeds, or seed cases, caused exclamations at every step; being shod I did not feel them. It was getting well on in the afternoon when we came out on a sort of natural clearing, and finding there was water to the south in a slight depression, determined to camp, though we had come such a short way, as we should not find good ground for it at the Nchong kha. The site here was covered for about twenty acres or so, by rank long grasses, now withered, and trampled down by elephants until quite open, a few large trees being scattered here and there, and it looked like an old Júm site. Several immense thistles stood dead, with the leaves fallen over and hanging close to the stem, the head branched and carrying the well known seeds. To make certain I cut several down, and took off the heads. The total height was from 15 to 18 feet in one case, and the hollow stem, 2″ diameter. None of the Asamese had seen them before, nor had the Kamti, or Singphus (so they said). It certainly seemed out of place in these forest jungles, and it occurred to me as having come transported on the north-east winds from the upper open ridges of the Dapha Búm. There were only some four or five of them, as far as we saw, and all—as they stood—looked remarkably handsome and suitable as designs for Candelabra.

Very soon our camp was pitched near the little pool or sedgy hollow, near trees, and hearing several remark how very cold the water was, I found it at 43° F. I made the men fire the grass, and being very dry

it soon caught and roared and crackled till it gradually burnt out, leaving the view along the upper Dihing towards Khomong pretty clear, and I could get the telescope to work. The crests of the Phungan bearing 120° whereon snow lay in several large patches, and many small ones, appeared to have the hard rocky outline seen on "Wathong," indicating frost and an utter absence of vegetation. We were here much nearer this latter, and the peaks to the east at sixteen miles were well seen even with the binoculars. The deep purple-grey of the bare rock contrasting beautifully in the evening sunlight, with the light and shadows, on the snow. We were at probably 1,500 feet elevation, and the air remarkably clear and steady, so that the distance seemed really less than half what it was. The ridges bearing 120° were on the contrary, only about twenty-eight miles (if "Phungan Bum"), yet appeared fully twice that distance. Several times I was tempted to look on them as much nearer the Mli kha than Wilcox put them.

After all had eaten, I put on a power of 200 and shewed them all the new moon. The old Kamti, who usually carried the telescope and legs, was particularly taken and sat out in the cold for a good half hour, after the others had had enough.

I may mention that the carriage of a fairly large telescope would be no easy matter if taken as it usually stands, with long brass tube and heavy tripod legs five feet long or so. To enable me to have the advantage without the difficulties of carriage, I made a light sassie wood square tube weighing 3lbs. and 4·6″ long in which the cell of the O. G. 3″·5 fitted, the other end so made as to have the eye-piece tube and rack motion, easily attached, the tripod of a strong magnetic compass, served to mount it, and the whole when complete, only weighed about 8lbs. Having the ability to put on a high power at times, as when camped at Dapha Pani, it enabled me, often when lying at my ease in the tent, to take long excursions all over the Dapha Búm, and very fairly among the snows, "without turning a hair," so to speak. It was particularly interesting at times when the sun was behind, to take up the lower part of some of the great seams or gullies on the face of such a hill as "Bum rong" in front of the Dapha, and to trace it up higher and higher. Lower down, as a deep shady chasm filled with tree ferns, plantains and fallen rocks, water dashing over and among them, the sunlight almost shut out in parts, where a straight piece gave quite a vista in. Again, great bare slippery rocks on all sides with the stream as a snow white streak, obliquely coming down the face of one at back (evidently a waterfall in the rains). Higher up, a long chasm, filled with shingle and tree stems, and still higher, where great shoots of stone have piled in the bed, and shew the clear surface of the bedded rocks. Above again numbers of feeders fall in on all sides, and not a trace of vege-

tation, all is bare hard, glaring rock, shimmering in the hot sun. Or at another time taking "Kunjung," in the region of firs, one could wander about almost as at Shillong among the grass and boulders and firgroups; some of which were very picturesque, and at last were so well known by sight, that I could almost sketch them from memory, ending my journey of two hours or so by a visit to the snow fields on "Wathong," the return journey which in person might take four days' hard work, being done now in as many seconds.

The drawback of a high power on a *small* O. G. is that the loss of light is so great that either detail cannot be seen, or it can only be used on such an object as the moon; again, while the best small O. glasses will only stand a power of 50 and 60 diams. per inch, larger object-glasses up to 3″·5 dia. will stand 100.

Here on the top of this spur we found many large rounded boulders as on the Mbong yang and all seemed to be various forms of sandstone, not the gneissic or granitic kinds seen in the Dapha bed.

Early in the morning I took the temperature of the water in the pool at 39,° no doubt it was caused by the intense radiation. At the Dapha muk I had several times taken the temperature of the river in the morning and found it generally 51° F. air being 40° to 43.° The temperature of the *soil* at the same time by springs was, 62.° The temperature of sand must fall a good deal in clear nights. In the mornings all the boulders embedded in it, had a *white* band of dry sand right round. Here and there white patches were seen, large and small; one *invariably* found a boulder just below, at an inch to 1½, the heat from which had prevented the deposition of dew, on the sand over it.

Late at night and early in the morning we had heard the rush of the Dapha river, to the east, so in starting I calculated as if marching from that river, and we got off at about 10 A. M. as I always make the people eat first, (also their own custom).

We very soon came to the Nchong stream now a little dell and with not much water, all of us had a good drink as we should not get another chance till late in the day, At one place we came on a party of nine Mishmis, and some of our people exchanged opium for rice, they were crossing from the Teng kha (Tenga Pani) to the new Júms on Dapha, one girl had the peculiar pewter or silver coronet as an inverted crescent over the forehead, several had cross-bows, others spears, and one a sword. We then crossed the saddle between Nchong Búm and Joitho, which was pointed out by the Singphu, and over a long flat tract, in which we were shewn the site of old Bishi, where Wilcox passed, and which he marks. It could hardly have been noticed but for the forest being just there almost entirely of "Kot kora," the fruit of which can be eaten, raw or dried. The present Bishi Gam was born here.

Some way on I detected a peculiar smell in the jungles, and on enquiry was told we were close to a Pung, and ere long descended into a deep triangular depression with swampy bottom, on sand. The water, of a pale bluish colour (as if diluted with shale mud) rose in an irregular jet about 6″ and 8″ high in a little pool and passed off as a stream. It had a peculiar saline taste, I took a sample, but later on lost it, the Singphus look on this water as a cure for goitre.

About fifty galls per minute rose. The place has been used as an elephant trap, a skull and bones lay there of one shot some time before. The Muttok Gosain now and then shikars here I believe. The Hingori seeds were all day a perfect nuisance, first one then another got the thorns in their feet, and I now ascertained why the Singphus took us round by the gorge. It was to avoid them. There are thus three quite distinct routes for passing Nchong Búm, one by the gorge which we took, and which is very nearly what Wilcox calls "impossible," another straight over the hill at once, very steep and fatiguing, so all say; and the other which Wilcox went by, and we were now on, tolerably level and easy, (bar the thorns). The men all tried sandels of wood and bark, but they tripped and caught so often, that one pair after another, were blessed and flung away, and they hobbled along here and there, like a row of cripples in preference. Eventually "Uren nong" lost his way, and I called a halt for half an hour, as the wandering about was only wearisome. On his finding it we soon after came to the Dungan kha, and as Wilcox says, it is "one continued rapid." And we emerged from it, at last! opposite the mouth of the gorge where we were all so nearly blown away. Not wishing to chance a repetition of the gale we went on and camped in a cosy corner under a big bluff that projected into the river, and where we found already, two log huts and piles of firewood, we were here very nearly at the end of our rations, and had only one good meal all round left, so they had half now, and kept the rest for the morning. During the night the wind rose and though no rain fell, we should have again fared badly if it had not been for the shelter of the corner we were in. They say that this is always a windy site, and the name is "Dungan yup."

Very early in the morning I made three of the Singphus start off at once for Bishi for rice and to return and meet us, they went very much against the grain, but there was no help for it, we then started at about 9 A. M. the load men by a detour, to avoid the steep rock, up which the Kamti and I climbed, with difficulty, as it in places overhung. As we started, a large party of men and seven women, appeared on the off-bank, from Khomong having come viâ the gorge, Lutak and I soon after crossing the bluff, met them as they emerged from the bad ford, where all the women joined hands, (held up) as they crossed, in a line up-stream, a very sensible plan.

Hardly one of the men, and none of the women had ever seen a European before, so I was considerably and closely criticized. Many brought over daos to exchange for salt, to carry which specially some of these strong girls had been brought over, and were to take back 2 maunds each, *i. e.*, 180lbs., all seemed in good spirits, however, and soon after waded the river again, and pushed on faster than we cared to follow. By slow but steady walking we at last got to "Pen" gaon, by about 3 P. M. and found that our men had failed here in getting rice, which was at famine rates, and had gone on to Bishi, where we followed, and camped at about 4 P. M. having done from near Dapha Pani, in two days, what took four in going and in a pinch might perhaps be done in one, if certain of the road. Of course we here got plenty of rice, vegetables, &c., which mainly we were short of. Some old fellows, and one who could speak Asamese, came to enquire how we had got on, and confirmed a good deal I had heard as to routes, &c. It seems the Dapha Gam, when he fled from Bishi, went to the site we had passed at Nchong bûm, and was there some time, but his unruly habits and raidings obliged us to follow him up with the "Singphu expedition" and he then fled to the Mbong Yang to be safe. He was, however, dislodged from there by a party under native officers (Lola Sing Sylhetia) the Europeans being I hear, wounded *en route* near Bishi and Miao, and at last decamped for Hukong viâ Khomong, from whence there is a route into upper Turong.

It is said that for some time, the cattle that had belonged to the Gam and his people, ran wild, and even had been seen not many years ago, I could get nothing certain as to this, and doubt there being any now with Mishmis, and rubber-hunters all through the hills.

Early next morning we packed up and I made some small presents, an electro-mug to the Gam, assortment of needles, tapes, and such, to his wife, &c. The load-men I paid, Rs 6 each for the trip of about eleven days, and gave them some opium in, I should like to have been able to be more liberal, but there are many incidental expenses connected with an expedition of this kind that swell the sum total, to no small amount ere all is over. What would be considered extremely moderate, by Government, or to any subsidised expedition, may be heavy on any single individual, especially when no return in the way of profitable trade is yet possible.

Passing west for Loang village we first saw the site where these Singphus devoted offerings to their demons or nats. It was a picturesque site among some tall Jutuli trees that threw a more or less mysterious shade on the cleared space below, where there was a house some 330 × 12, of the usual kind, and the skulls of buffalo here and there tied to the tree stems, as relics of the feasts and offerings. Singphus are grossly superstitious, and their entire belief seems to consist in a series of demons who

must be propitiated or evil results will follow. The slightest pain or sickness, is considered the work of a Nat, and must be counteracted by an offering of eatables, a bad spleen will therefore cost a man of standing seven or eight buffaloes, ere he is killed or cured himself, and the chances of the latter are small.

Any ordinary native doctor should here make a fortune in a very short time, as the people are ready to look on all drugs as charms, more or less, and pay accordingly. In a rice flat west of Bishi we were warned to look out for a wild male buffalo that was gradually becoming one of a herd of tame ones, and which the Singphus soon intended to shoot for a feast; sure enough as we turned into a small flat of open land we saw about eight or ten buffaloes, mostly lying down, one of these a male then got up and stared at us, gradually but slowly moving off to the edge of the scrub, where he disappeared when we were only about eighty yards off, the others all remained. As an instance, where a large and usually very wild animal can become more or less tamed, and semi-domestic, by associating with tame cattle, it was a very good case, and noteworthy to naturalists.

The very marked difference towards eastern Asam especially between the tame buffalo there, and in Bengal is due to the above, and that the large wild males so often have access to the tame herds. The Bengali tame buffalo indeed can be usually picked out at once in a mixed herd by the *degraded horns*. Smaller, more curved down, and giving the frontal region a rounder contour, the horns also are not so nearly in the plane of the face and nose, less effectual as weapons in fact. When two male buffaloes fight they first appear to circle around and take each other's measure. Then suddenly with a rush collide, their heads held down and face to the ground, the skulls meet with a fearful blow. Each then endeavours to force the other backwards using all their huge force and making the sods and jungle fly. If well matched they struggle thus for some time and endeavour to gore each other's shoulders and neck, by lateral thrusts of the horns, twisting the head round as they push, and this explains the peculiar sweeping curve the horns have as CO.

Once turned, the victor pursues the vanquished for hours, if not a whole day. At first, strength and weight are the elements in a buffaloe's favour, subsequently speed. The wild males in Asam are at times fully twice the weight of an ordinary male as seen in Bengal.

After reaching Loang and pitching the camp, I wandered out north for a sketch of Patkai if possible, but the distance all along was haze. Coming home I saw some Singphus returning from "Turong ku," whence they had brought buffalo, and who found Patkai no difficulty. One of the party, a native of Hukong, was particularly inquisitive, and a great opium smoker.

The night was cold and windy with a little rain, the morning cold and foggy till 11 A. M. The men after eating tied a large bambu on each side of the canoe to steady her at the rapids, and we packed up for departure; some boxes and a tent, by four men, went off by land for Bisa, and were to meet me there three days hence. We then embarked and after shooting several rapids, found that two of the men in the boat were hardly equal to emergencies; so I landed them and several of the boxes that I desired to keep dry, telling them to meet me at Bisa, and if possible overtake those who had started first and recall the Kamti.

We therefore had only Thang as steersman, while self and servant were in the bow, several rapids we shot thus, very well, though the pace was no joke now and then, and I donned my swimming belt as precaution. At one rapid we found a second shoot near the bottom, and taking Thang's advice kept to the left side, flying down it at speed, though we bumped here and there. When near the bottom where the river suddenly turned sharply to the right, we saw to our dismay a huge snag right across our path, which he had forgotten, so using all my strength I ran her ashore in a little bay at the side, striking the shingle with such force that the canoe ran a long way upon it and we were all thrown out. The stream, however, had caught the stern, swung her round, ending in a capsize, just as we had jumped up and were pushing her off. Luckily by pushing hard as she rolled over she cleared the snag and was carried down the rapid. Running along the bank we got ahead, waded in and caught her; but no easy job to hold and bring to shore. The lashings we found intact that had been passed over the boxes tent &c., and the two guns were safe (for a wonder); in fact very little was lost though everything was wet. While the other two got some firewood, I opened a cartridge, rubbed some of the powder on piece of the lining of my hat, which was dry, and with about quarter of a dram powder fired it in the air, getting fire at once; some dry leaves and grass soon were blazing and the logs caught.

Afterwards we lit several roaring fires and hung everything we could about to dry. My man at once started a kettle of tea and we got on very fairly. Our great anxiety, however, was to dry our clothes ere night, as rain threatened. Thang and I now got in more fuel while the servant got me dinner.

From what he said there was no possibility of avoiding a spill, and the Singphu's belief was that if we had held on, the canoe would have jammed *under* the snag and we should have lost all, and been unable to get her out. Ere dark we had a good many things dry and rain came on at night. Early next day we again got big fires going and about 11 A. M. were surprised to see the old Kamti, Lutak, our guide, and my Asamese "Milbor" turn up. Luckily for us the old fellow was superstitious, and got quite uncomfort-

able the night before, because one of the men had a dream that we had met some disaster in the canoe, so he had started at dawn and hunted up-stream and came upon us, quite expecting, as he said, all he saw, and heard.

For once I was thankful as to a "belief in dreams." With their help we got the bamboos relashed, everything again stowed, and embarked, going down the first five or six rapids most carefully but getting more confidence as we went on. Certainly the way we shot some, was enough to make any one hold his breath; there was little or no danger from rocks: it was mainly from the speed and bumping on boulders, that often threw the canoe violently aside, and at times the want of room to turn suddenly where the stream rushed down a side channel. The excitement was considerable, as often from the canoe we could not see the proper channel lower down, where all was hidden by the frothy tops of the small waves. There was hardly time to speak; in fact, one could not be easily heard with the rush of the water; and each time as we emerged into the deep and agitated water below (going fully ten miles an hour), we felt a relief. By and by we reached the rapid at the entrance to "Buri Dihing" and all got out, holding the canoe as we waded, and let her down, each getting in as he came to the deep water. Now and then we had a little trouble but gradually rapid after rapid was passed till we had come down a distance that had taken us three days in going up, and camped at one of the places we stopped at when coming up. Early next morning we got off and again got over what had taken three days going up, camping close to Bisa at Kherim Pani mouth.

At Jagon we got out and procured some rice as what we had been eating was bad, having got wet. We also found time to bargain for some vegetables that we were much in need of.

At Bisa I received my dâk (letters); and after the land party had joined, I procured a second canoe and we all went down by water.

Nothing of moment occurred till we reached Bor Phakial, the Kamti village above Makum, where I again stopped to see the Kunungs, and men over from "Mung Kamti." They came and spent a day with me, which enabled me to collect and verify a good deal of geographical matter, and write a limited Kunung Vocabulary. These men are called "Aung" by the Chinese (so they say), and trade with them eastward. I observe that these are the race that M. Desgodin locates there as "Loutse," and says the Chinese call them "A-nong;" undoubtedly they are these people who call themselves "Kunnung" as did also Wilcox in 1827. They say their tribes and villages are scattered all over the country from the Mli kha and Mung Kamti, to the eastwards, and are not confined to the Mli kha alone. They are celebrated as workers in iron which they smelt from ore of two sorts, sandy, and in lumps, like stone.

They extend somewhat to the north, and also a little southwards, and have colonies in the valley of the Nam sang or Disang, the tributary of the Irawadi about three days east of, and parallel to Mli kha.

As the trip practically ended here I may as well summarise the results, some of the information was new, and some of value as either corroborating former reports, or useful for checking them. First as to the direct route east up Dihing, or Diyun kha, past Bisa, Bishi, and Khomong for Mung Kamti, I learnt that the route as far as I went, and possibly to Khomong, was not so very difficult, was in fact much easier than I had expected as far as the Dapha Pani, being in the main a wide flat valley, and not a gorge.

From Khomong it is said to be ten days to Manchi, and the route soon leaves the Dihing or Diyun, crossing Songsan group, though between December and February snow may lie on the passes. This route or "Songsan bat," then goes to, and down the "Mung lang kha" from which a path leads north-east to Manchi, and the Mung Kamti villages. It is reputed easier than the Tsaurang bat route followed by Wilcox in 1827, north of Phungan Boom, and also shorter. A difficulty on each being that it is all uninhabited, and supplies for some ten days or so must be carried. Indeed, now there are fewer villages than when Wilcox passed; as between Pen or Kusan, and Khomong, while some five or six are mentioned by him, there are none now. The signs of former population we saw pretty often, and always where indicated on Wilcox's map; though the names are sometimes oddly spelt, thus his "Insoong" is the Nchong, "Puseelah" is Bisa-la, "Koomkoor" is Kum-ku. At each of these there were villages in 1827, as also at Oglok and Lujong.

The want of villages is insisted on, by the Singphus and Kamtis themselves, as the greatest difficulty, as people must now travel fast and have no time to spare, either to look for easier tracks, or improve those in use. At the same time it is not so very long ago that these villages existed, and that, "Lall Chand Kyah" sold his wares on the Mbong yang plateau east of Dapha Pani, as I am told.

This want of population (which is also a drawback on the route over Patkai to Namyang for Hukong), does not exist to the same degree east of the Mli kha, whence there are several routes east, over low hills, then a central ridge, occasionally snowed, and down to the Disang or Sang kha (called also Nam sang), a journey of some three days. Thence they say the route crosses a range dividing this Disang from the Do ma or Nam Do Mai, also a tributary if not the main stream, of the Irawadi, and which is known under so many names.* East of this there are ranges north and

* Shue mai, Sgin mai, Shuey mai, or Shoe mai, Zin mai Phung mai Kha, Myit nge, Do Mai.

south that divide this river from another (evidently the Salwin); but none of them had been so far, and they seemed to confuse the Salwin and the Mikong together; traders, however, pass east and west across the tract dividing them from the boundary of China.

According to these Kunungs and a Kamti who seemed well acquainted with these matters, the Do mai is the same as the Shoe mai and a somewhat larger stream than the Mli kha, or Sang kha, confirming the supposition of Dr. Clement Williams, and the paper on this river by Dr. Anderson (read before the R. Geographical Society some eight or ten years ago) in which he fairly demonstrated it as the main source of the Irawadi. This, and the references thereto, in Mr. Jenkins' paper and my former reports, seem to have been overlooked by Mr. C. H. Lepper when lately claiming this as a new discovery. There can be very little doubt but that Dr. Anderson is right, that the Shoe mai kha rises in Tibet. The only doubt in my mind was whether it was the lower portion (or not) of the river known north as Nú kiang. Recent observations, however, by Gill, M. Desgodin and others seem to prove that the Nú kiang and Salwin are really the same as shewn on the map by M. Desgodin.

While on the matter of routes I may mention that the Kunungs report routes north; one of these men, indeed, had been that way into Tibet; another route from the Mli kha, led north-west towards Brahmakund, and the Mishmi country. They could give me no information as to any from their villages towards the north-east, though it may exist. Routes south seem pretty numerous. People often come and go by them to Bamo and the Shan states, also to Hukong.

It is a noteworthy fact, and one deserving careful attention that the country lying east of Asam, between it and China, seems even in our day so little known through the absence of traffic over it, that we cannot even name the rivers in succession, with absolute certainty.

This is no doubt caused by the difficulties due to its peculiar formation. It is situated at the south-east corner of the great Tibetan plateau, where the rivers converge, and have such a rapid fall, to the level of the southern plains, in channels more or less parallel, that they have cut out deep valleys and even gorges, extremely difficult to *ford*, or *ferry*, or *bridge*, except by iron chains. Every here and there the line of route, otherwise not easy, is completely severed by a deep valley and gorge, and long detours are necessary.

Here and there on this tract we see the iron chain bridges that demonstrate the character of the obstacles, and that have successfully *linked the route fragments together* so far. The local engineering capabilities, however, are crude, and no doubt if longer spans were possible, these impassable gorges could be crossed at far more eligible sites for a route.

If one is ever feasible between Asam and say Atentse viâ Mung Kamti and the Lutze or Kunung country, it will be by the construction of a few light wire bridges, at a few selected sites at present impassable.

Even in times long past, when both the Government and people of China were, from religious motives, anxious to find easy routes to India there was none known, over this short section. Those used were the sea route viâ Quantung or Canton, the Straits, and the Bay of Bengal; the other was "the old route" through the northern deserts to Khoten and Kashmir.

In the Journal R. A. Society, October 1881, page 552, the Rev. S. Beal, in an article on the "Chinese Buddhist inscriptions found at Buddha Gaya" gives a list of priests and others who travelled by these routes, and are recorded by I-tsang, A. D. 671 to 690, (1,200 years ago). In one case reference is made to a party who came over 500 years before, so that even under far more favourable conditions and great inducements to find a solution to this problem in the far past, it remained *insoluble*. I attribute it mainly to the gorges and river torrents that defied the engineering capacity then available. If a route from Asam due eastward viâ Mung Kamti is ever feasible, it will be by means of light wire bridges at carefully selected points.

With the experiences of Gill, Baber, and others before us, it seems, however, doubtful now if the game is really worth the candle. The difficulty of getting out of Asam at the eastern extremity is one thing, that of getting into China is quite another. The former I have drawn attention to for some ten years as quite feasible, viâ the Nongyang pass over Patkai; the latter has I fear been equally well demonstrated as the reverse, by others who have actually passed over the country in question.

I may also here say that the idea of a "neutral zone," surrounding Asam on the east and south-east, must appear erroneous to most of those who have studied this matter, and I observe that Mr. H. L. Jenkins is ominously silent on it.

As far as the tracts lying to the east and south are concerned, I believe them to be claimed by the king of Burma. It is not so very long ago that the Burmese Woon, attempted to overreach us, and step *over Patkai* to place his boundary north, on the Namtsik. Burmese influence also in Mung Kamti is equally assertive, and I heard complaints regarding it this last time, so that we may rest assured that the Burmese will be the last to admit Hukong as "neutral," even though filled by various unruly clans disclaiming their authority.

When making enquiry as to the comparative value of various routes, east and south, I ascertained that the one from Makum viâ Khomong to Mung Kamti, east, was about equal in distance and difficulties to the one from Makum viâ Naga hills to Hukong, (now commonly used and called the Tirap route). The elevations too, were much the same, and we hence

get a clue to its feasibility. When examined on the map it will be seen that this distance is about half the total on a direct line to Aten-tzu on the Kinsha kiang. One-third of this total I had just seen, presented no great obstacles, *i. e.*, from Makum to the eastern end of the Mbong yang plateau Longitude 96° 45′ (near Khomong). Thence to Mung Kamti is over the Songsan Boom with perhaps elevation of 8,000 feet. The Mli kha valley is pretty level (see Wilcox also) and the hills east of it have passes at about 3,000 feet leading to the Disang. Thus we know something of this route for rather more than half the way, (*i. e.*, four-seventh) and only about fifty miles remain, to join it to Gills' route. But of this fifty miles all I know, is, that it must cross the Shoemai, Salwin, and Mikong. It is a great pity that Government has not finished up the survey of Asam even within our own frontier, as far as Phungan Boom, and the head of the Dihing valley, especially as there cannot possibly be any objection locally ; and we have men such as Col R. G Woodthorpe, R. E., thoroughly competent and probably willing for the work ; were the Surveys on our own side executed, it would go a long way towards simplifying this rather complicated question.

The possibilities or otherwise, of opening a route from Asam either direct to Aten-tzu, or viâ Hukong to Tali fu, and western Yunan is one thing, the advantages or otherwise of such routes compared to their difficulties is another, and a matter I at present do not discuss, especially after the late Capt. Gill, E. Colbourne Baber, and Colquhoun have so emphatically denied the value. In the present I confine myself to the borders of Asam eastwards and the passes and people around.

Some words in Kunung, S. E. Peal 1882.

Vowels.	a as in Rat *a* as in *Father* e as a in say.	u as oo in *poor.*	i as ee,	ch as tsh.	ai as in aisle aw as in awe
One	ti	Ear	*a na*	Neck	nyin
Two	ani	East	nam shai	Nail	ling
Three	asam	Elephant	magoi	Net	kon
Four	a vli a bri	Eye	ne	Night	a gui
				Nose	sa na
Five	pang*a*	Father	*a* pai		
Six	kru	Fence	duen	Oil	su
Seven	syen	Finger	de gong	Opium	k*a*ni
Eight	syet kyat	Fire	tami		
		Fish	na chi	Path	p*a* r*a*
Nine	tai gu	Flower	sing wat	Plantain	langu si
Ten	san ti san	Fly	si.	Plough	pung kang
		Foot	hi ben		
Twenty	ani san	Fowl	kh*a*	Rain	su w*a*
		Frog	deri and dri	Rice	m*a* kum
				Rivulet ?	vang chi tu
Arm	uur.	Goat	tang kre	River ?	to sin de kh*a*
Arrow	t*a* m*a*	Gold	kham	Road	pa r*a*
Axe	p*a* jeng	Gong	tseng		
Asam	Mong Nung	Goose	obit	Salt	s*a* l*a*
				Sand	ching phi
		Hammer	to jan	Shield	t*a* g*a*
Bambu	m*a* s*a*ng	Hand	u ben	Silver	y*a*
Bead	re sit re cit	Head	a phe	Sister	*a* nam
		Hill	ma jui	Small	ny*a* chan
Bear	sui	Horse	mung r*a*ng		
Bellows	l*a* sut	House	kin	Smoke	ma ui (Fr. Butter)
Big	g*a* b*a*				
Bird	p*a* chi	Iron	s*a*m	Snake	bur
Blood	su			Snow	t*a* nan
Boat	kong si	Jungle	*a* rum	Son	a chan
Bone	r*a* g*a*			Spoon	k*a* ni t*a*
Box	tyek	King	n'k'm ju r'kom ju	Steel	tsam and tsi
Brass	syen			Star	gu met.
Bridge	nam phan	Knife	khi	Sun	nam gang
Buffalo	nu g*a*				
		Lake	si kong	Tea	phalap
Cat	ning aw	Leaf	ta w*a* lap	Thigh	ma chi
China	kho	Lead	hik	Tibet	Ching ku g*a*
China man	kho a s*a*ng	Leg	m*a* chi	Thunder	mu din
Cloth	yo	Calf of leg	mo bo	Tiger	kang
Coal	wam	Leech	k*a* phat	Tobacco	ya mum
Crow	tang kh*a*	Loom	yo r*a*	Tongue	pa lai
Cotton	pu si				
Country	y*a* g*a*	Man	a sang	Village	mereng gub*a*
Cow	pan su	Mat	p*a* lu	,, (small)	mereng chan
		Milk	nung		
		Monkey	a goi	Water	wang
Dao Knife axe,	sam sum	Moon	se l*a*	War	t*a* bu
		Morong	tum l*a*	West	nam nup ph*a*
Day	r*a*ng	Mother	*a* mai	Wind	nam bung.
Daughter	chan mai	Mount	m*a* jin	Woman	po m*a* shang
		Mouth	noe	Wood	kh*a*m.
Dog	gui				

IV.—*On the recent existence of* Rhinoceros indicus *in the North Western Provinces; and a description of a tracing of an archaic rock painting from Mirzapore representing the hunting of this animal.*—*By* John Cockburn, Esq.

[With Plates VII and VIII.]

[Received 7th June—read 1st August, 1883.]

On the 5th of July 1881 while hunting in the ravines of the Ken river two miles due south of the town of Banda, I had the good fortune to discover the fossil remains of a rhinoceros.

My attention was first attracted by a number of minute fragments of teeth which whitened the surface of a ridge. On closer examination I clearly identified the outlines of the skull of a Rhinoceros, marked by a faint trace of fragments of bone. A glance at the pattern of a fragment of a molar satisfied me of the correctness of my identification; and carefully marking the spot, I returned next morning accompanied by J. La Touche, Esq., the Collector, H. Miller, Esq., the Assistant Magistrate, and C. F. Knyvett, Esq., the Superintendent of Police. These gentlemen with much spirit, aided me, and we dug up an area of about 4 square feet with our own hands till no further trace of bone occurred.

The appearance first presented was deceptive; the inferior lateral half of the skull was not perfect as might have been expected from the outline observed, and all the bones were in a fragmentary condition.

The bones and teeth obtained were the ascending ramus of the left inferior maxilla as far as the insertion of the last molar in four fragments; a fragment of the glenoid cavity of the right scapula; the right incisive tusk nearly perfect; several lower molars; and one perfect upper molar, which I regret to say was much split and dropped to pieces, when it was found impracticable to put it together again.

A large quantity of fragments of teeth together with some longitudinally split pieces of the shafts of long bones were also obtained.

The presence of well defined cingulum on the upper molar led me at first to suppose that the remains belonged to an extinct species, but on carefully comparing the extremely fragmentary fossils in company with Mr. Richard Lydekker, the remains were found to resemble those of *Rhinoceros indicus* sufficiently closely to enable us to tentatively assign them to that species.

R. namadicus to which species we might otherwise have assigned the fossil is now admitted to be identical with *R. indicus*.

The mineral state of the fossil, the nature of the locality it was obtained from, and the associated genera found in the Banda ravines closely

resemble the conditions under which Mr. Foote's *R. decannensis* was found.

Immediately below the rhinoceros bones was a hard stratum, 4 feet thick, which has yielded bones of *Bos*, *Equus*, *Portax*, and antelope.* The rhinoceros bones were slightly impregnated with mineral matter and studded with small nodules of kankar but not sufficiently so to imply any great antiquity. Other fossil bones picked up in these ravines are very highly impregnated with mineral matter possibly with a ferric base. Within 4 feet of the rhinoceros bones I picked up several chert and shell knives on the surface of the soil.

A molar of *Rhinoceros indicus* considered recent was obtained by Mr. Bruce Foote in the alluvium of Madras and is remarked on by Mr. Lydekker as "very interesting as showing the former range of that species far to the south of its present habitat, which Jerdon gives as the Terai from Bhotan to Nepal." (J. A. S. B. Part II for 1880, page 32.)

Carefully weighing the facts I came to the conclusion that these remains were not necessarily *very* ancient, and the split bones and shell and chert implements were evidence to my mind that the animal had been killed and cut up by savage man, at no remote period. Recently, (October 1881,) when asked by R. A. Sterndale, Esq., to contribute a chapter on Rhinoceros for his forthcoming work—"A Popular Natural History of the Mammalia"—describing *R. indicus* I wrote as follows:

"It is probable that this Rhinoceros was found throughout the plains of the North Western Provinces in unreclaimed spots as late as the fifth or sixth century."

According to the observations of Dr. Andrew Smith in South Africa these huge pachyderms do not absolutely require for their support the dense tropical vegetation we should think necessary to supply food to such huge beasts.† Since marching through the forests of the Maharaja of Benares in Keyra and noticing forest forms like *Shorea*, *Tectona*, *Diasperos* in alluvial country, their gradual disappearance when the humidity is lowered by debasement and the substitution of forms like *Butea* and *Zizyphus* characteristic of the scrubby jungles of the N. W. P., my ideas on the subject have considerably enlarged. I was not aware at the time that the Emperor Baber had recorded that he found both the rhinoceros and elephant common under the walls of Chunar when he visited that

* A list of the fossil shells found by me in the same locality and presented to the Indian Museum was given me by Mr. G. Neville, but I have unfortunately mislaid his letter.

† The tapir alluded to by General Cunningham as occurring on the sculptures of the Bharhut stupa is a mythical rhinocerote. The pensile lip is tolerably characteristic.

fortress in 1529, never having had the good fortune to meet with a copy of that rare work, Erskine's "Baber."

The accompanying tracing of an archaic petroglyph from the Ghormangur rock-shelter near the fortress of Bidjeygurh in the Mirzapore district, testifies to the recent existence of the Rhinoceros over this tract.

This drawing is of surpassing interest not so much on account of the portrait of this huge animal fast receding before civilization, and practically extinct in continental India—or of the vivid and spirited hunting scene probably many centuries old which it recalls, as owing to the clear and characteristic manner in which the spears used are depicted.

These spears I consider to have been made of wood and stone only. The reasons for this conclusion will be stated further on.

Admirably executed drawings of *Bos arni*, *Bos gaurus*, *Rhinoceros*, *Elephas*, &c. occur in most of the rock shelters in the neighbourhood and at first sight might be supposed to be of great antiquity, but it appears to me that they need not be more than 300 years old, if not less. For if the rhinoceros and elephant were found near Chunar on the banks of the Ganges in 1529 they were probably more numerous at the same time and continued to exist later, on the banks of the Sone where these shelters occur, a country yet covered with forests harbouring the tiger, bear and sambar.

Granting the possibility of these drawings being comparatively modern, we find ourselves face to face with the astounding conclusion that the "stone age" has but recently passed away among the aborigines of the Kymores.

A state of stone culture calls up a host of anthropological questions; but before going further I may mention that I had long before come to the conclusion that the aborigines of the Kymores were in a stone age as late as the 10th century A. D. The remarkable piece of sculpture from Kalinjar, now in the Indian Museum, which was supposed in the short note by H. J. Rivett-Carnac, Esq. (read by me before the Society, P. A. S. B. January, 1883,) to represent an aborigine armed with a stone axe is possibly, from the absolute identity of the axes and chert implements found in the rock shelters of Mirzapore and on the surface in the vicinity of Kalinjar, intended to represent one of the same race as those who hunted the rhinoceros in Mirzapore.

The tracing of the rhinoceros hunt Plate [VII] is a faithful tracing of a petroglyph in the Ghormangur cave in Pergunnah Bidjeygurh of the Mirzapore District.

This cave was visited by me on the 17th of March 1883. Its exact position is two miles due south of Mow Kullan bridge, and within three miles of the celebrated fortress of Bidjeygurh, and five of the river Sone.

This rock shelter has the appearance of a huge mushroom. It is a

gigantic boulder, the remnant of some rocky ridge with the sides scooped out by atmospheric agency for three-fourths of its circumference leaving a huge central pedestal or stalk on which the drawings have been executed.

The drawings are in the usual red pigment which was generally hæmatite, pieces of which were dug up in caves. This was probably mixed with animal fat and laid on with a fibrous brush, while the outlines were executed with a pointed stick.

These drawings are as a rule in tolerable preservation probably owing to the fact that they have been protected from the weather by the situation of the cave.

The first drawing of a rhinoceros observed by me was in a shelter about 400 yards south of the camping ground at the village of Roup in Pergunnah Burhur. It was at this village that Dr. Hooker camped on the 3rd of March 1848, (See Him. Jour. Vol. I, p. 60) and its position is plainly marked on the map that accompanies his work. The sketch was about 3″ long, and I am not ashamed to confess that I did not recognise the animal at the time, probably unconsciously deeming it incredible that the animal could have occurred here. The following extract bearing on the subject is from my note book.

"February 9th.—There is a group of three men attacking a boar whose tusk is planted on the tip of his nose like the horn of a rhinoceros. Two of the men who are in advance wear short skirts, but the form of their lance heads is on too small a scale to be defined. Attacking him from the rear is the obliterated figure of a man on a large scale, and the form of lance-head he is using plainly indicates the chip spear."

The next step in the process of the discovery is detailed below in an extract from my note book.

"March 14th.—Harni Harna cave near Bidjeygurh. There are numerous well executed drawings of Sambar hinds identified by the stag alongside, but the most remarkable drawing is what looks much like a rhinoceros hunt. The drawing is much injured; there are traces of six men (whose uplifted arms are evidently discharging spears) pursuing an animal, which the evidence of my senses compels me to say resembles a rhinoceros. The horn is perfectly represented, and had not half an inch more of the snout scaled away, I should have been able to identify the animal with certainty."

The same night in a foot note to the notice of their Roup cave, I remarked —" Having since found several drawings of boars with the tusks in the right position I consider it improbable that men who represented animals so accurately as these savages, would have drawn a boar's tusks, thus (on the top of the nose). This may be evidence in favour of the animal seen to-day in the Harni Harna cave being a rhinoceros." Knowing I was

in a promising locality, I strained every nerve to find a more perfect drawing, walking twenty miles a day, and undergoing more fasting and privation than the most enthusiastic votary of superstition.

The question no longer admits of doubt for the animal in the drawing now exhibited is as plainly a rhinoceros as the objects around it are men.

On the 17th of March I had the good fortune to be shown to the Ghormangur cave which is well-known to the Kol and Gond wood-cutters in the locality, though they were quite ignorant of the fact that scores of other caves with paintings existed higher up the bluff. This cave is called the Ghormangur or horse cave, and was said to contain drawings of horses, but I was quite unable to find a single drawing of the horse although this animal is not uncommonly depicted in other caves.

I may now proceed to a description of the sketch [Pl. VII,] which is a faithful tracing taken by brushing tissue paper with kerosine oil to render it transparent securing it on the rock with pellets of wax and going over the lines with a blue pencil. The kerosine oil afterwards readily evaporates on exposure to the air.

A group of six men have attacked a rhinoceros identified at present with *R. indicus.** One of these the animal has tossed with his horn and the position of the man sprawling in the air is comically like our own drawings of people tossed. A man wearing an unusually large head-plume who is in the rear has tried to draw the animal off by plunging his spear into its hind-quarters. His attitude indicates that he has thrown his entire weight into the thrust.

In front of the enraged animal are two men, the lower of whom in an attitude highly indicative of action, has what appears to be a simple spear of hardened wood with two supplementary barbs, levelled at the animal's breast. The upper of these two figures has nothing remarkable about him, his head-plume differs slightly, and he seems to be armed with the ordinary triangular-headed spear with two supplementary barbs which is found throughout these cave drawings.

* The sentence in Jerdon's Mammals, p. 234 under *R. sondaicus* "One of these species formerly existed on the banks of the Indus where it was hunted by the Emperor Baber," has been usually considered by subsequent writers to allude to *R. sondaicus*. I am strongly inclined to think that the species hunted by Baber was *R. indicus*. I am not aware what authority Jerdon had for saying that *R. sondaicus* was found on the northern range of the Rajmahal Hills near the Ganges, but have a faint recollection of seeing some such statement in an old Indian sporting publication.

Ball questions the fact. It is, however, unfortunately but too true that neither Blyth nor Jerdon knew *R. sondaicus*, Blyth having named a characteristic stuffed specimen of *R. indicus* as *R. sondaicus*. Blyth Cat. M. M. A. S. No. 460 A.

Only one of these men appears to be absolutely naked, the others appear to have on a short kilt which is elsewhere represented in this cave and may have resembled the fringed kilts commonly worn by savages in all parts of the world.

All save two it may be noted wear head-plumes, a characteristic of savages although our field marshals might demur to this statement. In the hindmost individual this plume is of unusual size. An examination of a head 3″ long in which the plume is plainly shown leads me to believe these plumes were coloured feathers and other objects worked into a queue or scalp lock somewhat similar to those indulged in by the Nagas and North American Indians at the present day. The lines which occupy the head and body of the rhinoceros I have noticed elsewhere. They may be intended to represent the segments into which this animal almost appears to be divided by the overlapping coat of mail, but are more probably a conventional way of filling up blank space in a drawing. There are a few other objects of interest in this cave which have not been noticed elsewhere. In the hand of a plumed individual to the left of the rhinoceros hunt is a spear valuable as being drawn on a somewhat large scale and being in a very perfect state of preservation. [See Plate VII.]

This spear closely resembles the mongile or double-barbed spear which is a favourite pattern with the modern Australians and Polynesians, and is always cut out of solid hard heavy wood.*

A very similar spear but with eight such barbs is figured by Brough Smith, in his Aborigines of Victoria. [Pl. VIII, F.]

It occurs to me at this stage that I have not yet brought forward the evidence, which has led to so bold a hypothesis regarding the material of which these spears are made and will do so now.

Stone-tipped implements of three kinds are, I consider, figured in the various caves I have hitherto examined, viz: spears, arrows and stone knives; but it must not be inferred from this that iron implements are wanting.

* With reference to the efficiency of wooden and stone spears for destroying large mammalia, it may not be generally known that an Australian savage has been seen not only to transfix but nail a man to a tree at 30 yards with a wooden chip spear thrown by the womerah.

They readily kill *Macropus major*, cows and even horses belonging to the settlers with these weapons and even the mighty whale succumbs to a slate harpoon-head in the hands of an Esquimaux.

Nearer home the Naga panjie which will penetrate any living thing shews how effective pointed bamboo may be. It is more than probable that some of the spears here represented were of bamboo. The bamboo found in the vicinity of Bedjeygurh is valued at the present day for spear shafts and latties beyond all others, and having had my own hog spears shafted with it I can testify to its superiority.

On the contrary almost every cave contains well defined drawings of iron implements which form one of the best proofs I have that the other implements so closely resembling those of modern savages were made of stone and wood.

For example, in a painting in a cave at Lohri I found what is an iron-headed spear [Pl. VIII B] But in this very shelter occurs also a drawing of a man spearing a stag sambar with a weapon, which is similar to one represented in the Likuniá rock-shelter, and which I am convinced every anthropologist will be prepared to accept as a non-metal weapon. [Pl. VIII, E] Another form of iron spear head, not uncommonly found in the hands of horsemen, is a typical form not unlike a lozenge-shaped form of head yet used among ourselves. [Pl. VIII, A.]

The metal arrow-heads here and there observed [Pl. VIII, C] are as obviously of metal* as the pike staves of the spears are of wood.

Lastly, I may mention that the foreigners usually represented in these drawings are often armed with round shields and curved sabres which apparently differ in no wise from the modern tulwar. I have also to state that I have actually found a portion of an iron arrow-head in a cave.

The best evidence we can have in support of the idea that the drawings above alluded to represent stone weapons is the fact that stone implements occur in abundance in the soil of the caves mingled with the identical material with which the drawings were executed.

The spear head D [Pl. VIII.] is I believe intended to represent a wooden spear as it is yet a favourite pattern with savages. A painting in the Lickunia rock shelter near Shahgunge represents a man about to spear a hind. The weapon in his hand referred to above is a spear with a broadly angular head followed by nine barbs. [Pl. VIII, E] The aboriginal Australians in smoked bark-drawings, and doubtless in caves, represent their stone spears in a manner so very similar to this drawing [See Pl. VIII, G] that I have no hesitation in expressing my opinion, that the similar weapons represented in the Mirzapore rock shelters were headed with stone, wood and bone, convinced as I am that further researches will abundantly prove the truth of this theory whatever the age of the drawings may be.

No modern form of iron spear-head resembling E is known to me. In a single instance I have observed, that the huge sword-shaped blade of the Naga spear was followed by two supplementary barbs which were of a piece with the blade.

The Andamanese not uncommonly whip on two or three supplementary iron or bone barbs to their pig arrows, but these latter are not usually in pairs but alternate.

* Specimens of this type made of iron are in the Indian Museum.

Both these Tribes have not long passed out of a stone age and the persistence of the custom points to the fact of their having used many barbed spears in other material at no distant period.

A multibarbed form of copper harpoon or spear-head appears to have been used in India during what here corresponds to the Bronze Age. Three such harpoon-heads were ploughed up in a field in the Mainpuri District of the Gangetic Duab, associated with flat copper celts and copper bangles. [See P. A. S. B. 1868, pp. 251-262.]

The celts were of exactly the same type as one found in a Buddhist mound at Muttra by General Cunningham (Arch. Surv. of India, Vol. II, p. 16). One of these copper spear-heads is now in the collection of the Indian Museum, and two other similar specimens were in the Allahabad Museum when I was Curator of that Institution.

The specimen in the Indian Museum is well worn on the first barb by grinding and has two eyelets at the base. The short thick truncated rounded tang in all three specimens favours the idea that they were fixed in a shifting socket as the Andamanese pig arrow is at the present day. They were not therefore necessarily harpoons for spearing aquatic creatures.

A larger and different form of copper spear-head, said to be from Bithur? near Cawnpore) is also in the collection of the Indian Museum. It has three pairs of blunt rounded supplementary barbs below the blade. I am not disposed to think that the broadly triangular head and fine sloping lines of the barbs of the cave-spears were intended to represent either of these forms in copper. The great number of barbs on the cave-spear adds much to the probability of these barbs having been of stone.

A peculiar class of angular flakes [Pl. VIII, H] very common in these caves were I would suppose let into grooves in wood as shown in the restoration of a stone spear [Pl. VIII, I.]

I cannot here refrain from stating that this discovery is entirely due to the liberality of H. Rivett-Carnac, Esq., C. S., C. I. E., F. S. A. without whose constant aid I should neither have been able to find the caves nor write this paper.

Note to the above.

Two important objections might fairly occur to a critic after reading the above. *First*, that Baber's identification of the rhinoceros at Chunar in 1529 is at the best doubtful. *Secondly*, that the occurrence of the rhinoceros in the vicinity of Chunar would imply the presence of forests there, whereas the district now is semi-arid.

With regard to the *first* objection I would point out that Baber was *previously acquainted* with the rhinoceros. His description of the rhinoceros hunted by his son on the banks of the Indus is most accurate, and leaves no room for doubt as to the genus of the animal he described. He compares the folds of its skin to housings and its internal anatomy to that of the horse, a fact which subsequently required the

genus of Cuvier to detect. With regard to the *second* objection as to the existence of forests in the vicinity, there is in my opinion ample evidence to show that tree forests existed not only near Chunar, but right through the Gangetic Duab as high as Cawnpore till the 16th century and later.

It requires same abstraction to conceive that this now semi-arid region largely productive of reh and usar was covered with forest so recently, but such was without doubt the case. Wild elephants are stated in the Ayeen Akbari to have been found near Kalinjar in Banda, in Kuntil, in Mirzapore, Kurrah Manickpore, in Allahabad and Chunar. These points define a former forest tract throughout which stone implements occur.

Rhinoceros indicus, it may be noted, frequents grass by preference, while *Rhinoceros sondaicus* is a forest and mountain loving species. But the habitat of *R. indicus* at the present day, the great grass jungles on the banks of the Brahmaputra, and those of the Himalayan terai are in either case bordered by forest, in which the rhinoceros is occasionally found, and seeks refuge when pursued. In the occurrence of both the rhinoceros and elephant near Chunar in 1529 there is evidence that extensive forests did exist in the immediate vicinity of the river's bank; for granting that the rhinoceros did frequent the heavy grass which was certain in places to have covered the alluvium within the immediate influence of the great river, such would not have been the case with the elephant, for the food of *Elephas indicus* consists of succulent leaves, shoots and twigs, and it requires large tracts of forest to maintain itself; differing in this respect from its African ally. We have, however, the evidence of a modern Englishman which shows that my supposition regarding the bordering forest is correct. Capt. Blunt who marched from Chunar to Ellora in 1795 records that a "thick forest" existed between the Jurgo nadi below Chunar and Suktesgurh, (Asiatic Researches, Vol. VII, 1801, p 57.) The Chinese Pilgrim who in the 7th century marched from Allahabad to Kosim stated that he passed for several days through a vast forest infested with wild bulls. I have marched by what is considered by General Cunningham the same route, and was struck by the absence of vegetation, and the prevalence of reh. Bits of dhak jungle (*Butea*) scattered over this tract may be the remains of what was once a forest. This growth everywhere in the N. W. P. appears to replace true forest forms, once the conditions necessary for their existence are altered.

The change effected in the climate has undoubtedly been great, and everywhere in the plains of the N. W. P. dried watercourses and rivulets, barren ravines, and saline efflorescence, attest to the slow but certain progress of aridity and exhaustion.

As regards the precise locality where the drawing of the rhinoceros hunt was found, sal forests yet exist there in patches, and the occurrence of numerous characteristic drawings of the Bison (*B. gaurus*,) a forest loving animal, renders it nearly certain that primæval forest existed at the time. In the swamps engendered by these forests I would suppose the rhinoceros depicted to have lived. Both *R. sondaicus* and *R. sumatrensis* frequent what must be very similar localities at the foot of the Garo, Khassia and Naga hills where I was informed by the late Major C. R. Cock that he had seen both species.

The cover frequented by the rhinoceros seen by Baber on the banks of the Indus would better be discussed by some one more familiar with the Province than I am, but there is much probability that forests harbouring elephants existed at the period of the invasion of Semiramis.

EXPLANATION OF THE PLATES.

Pl. I. (Not published) Cyrestis.

" II. View from the mouth of the Dapha Valley, N. to N. E.

" III. Highest peak of the Dapha or Wathong.

" IV. Sketch Map of Asam.

" V. Sketch Map of the Dihing basin.

" VI. Asamese Weapons.

" VII. Rhinoceros-hunt Scene (¼th the original size) Ghormangar Cave.

" VIII.

A. Iron Spear (Chunádari Cave).

B. Iron Spear (Lohri Cave).

C. Iron Arrow-head (Chunádari Cave).

D. Wooden Spear (Ghormangar Cave).

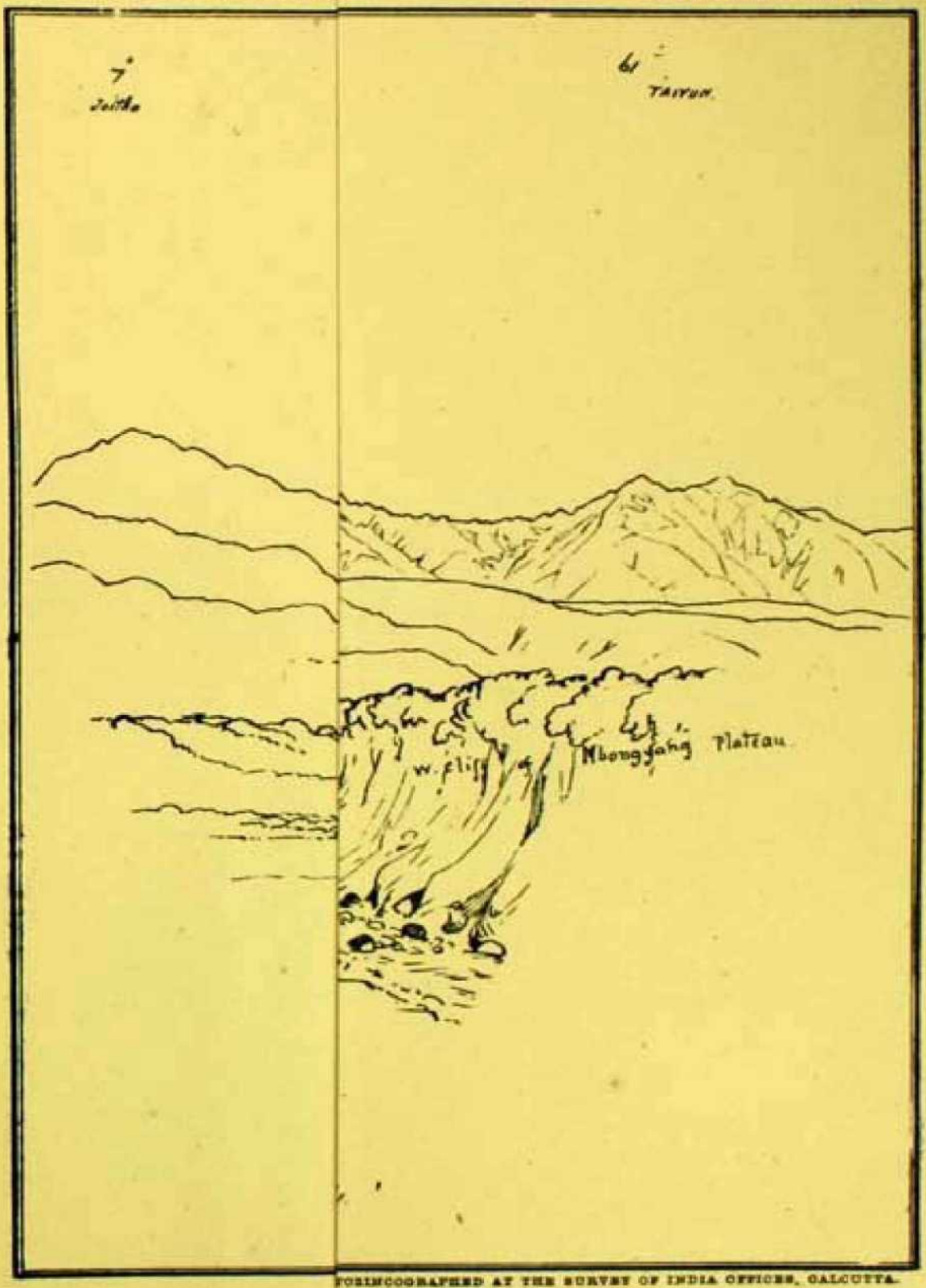
E. Supposed Stone Spear (Likunia Cave).

F. Wooden Mongile from a bark-drawing by an aboriginal Australian (copied from Brough Smith's "Aborigines of Victoria").

G. Chip Stone Spear (Brough Smith).

H. Angular flake found in Caves.

I. Attempted Restoration of Cave Stone-Spear.



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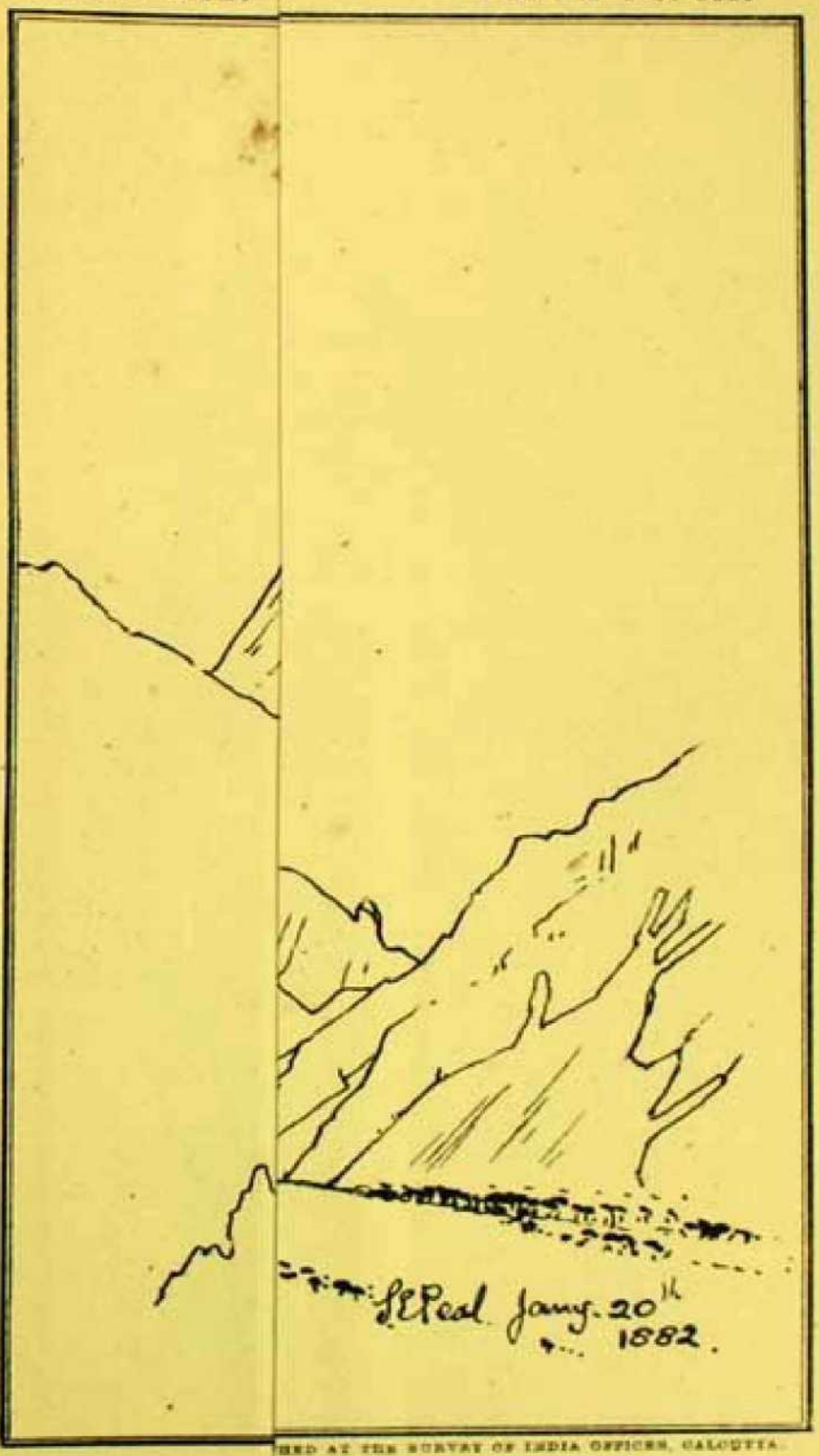
S. E. PEAL.— PLATE No. III.



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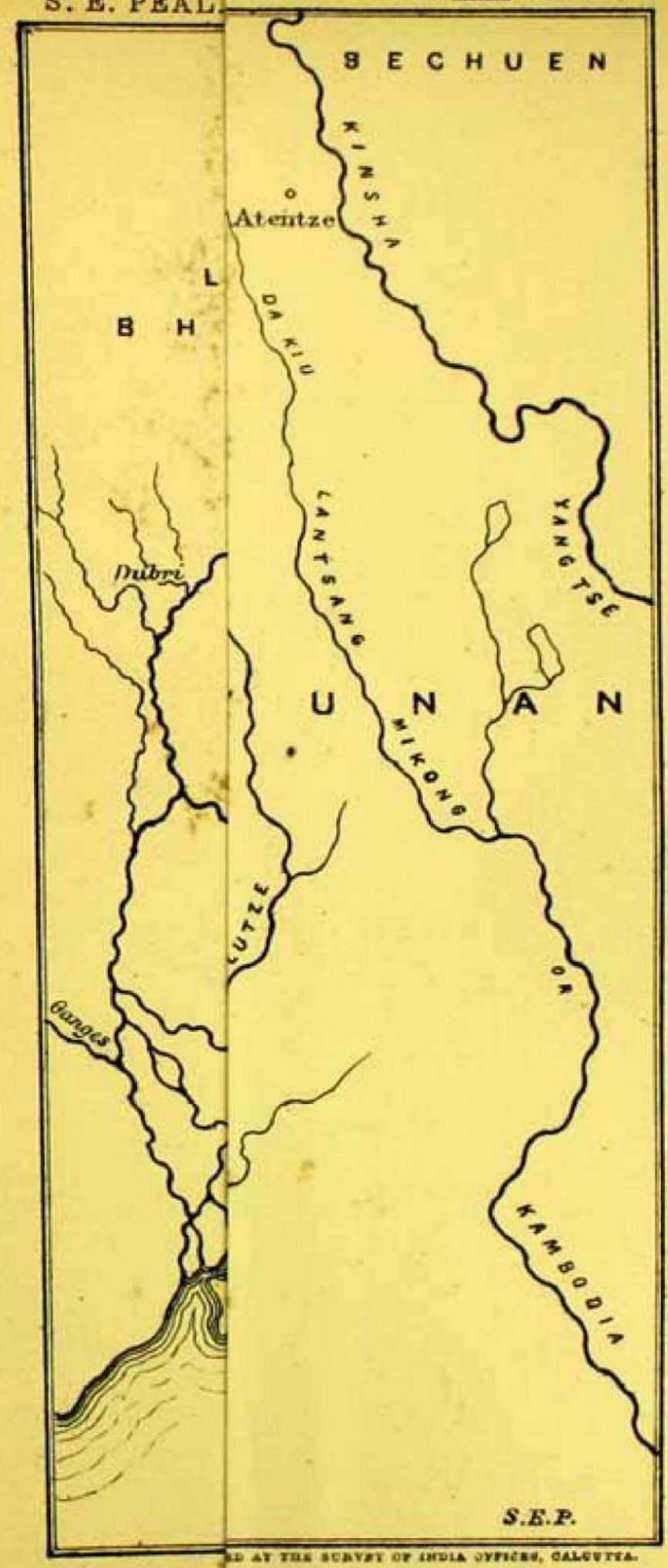
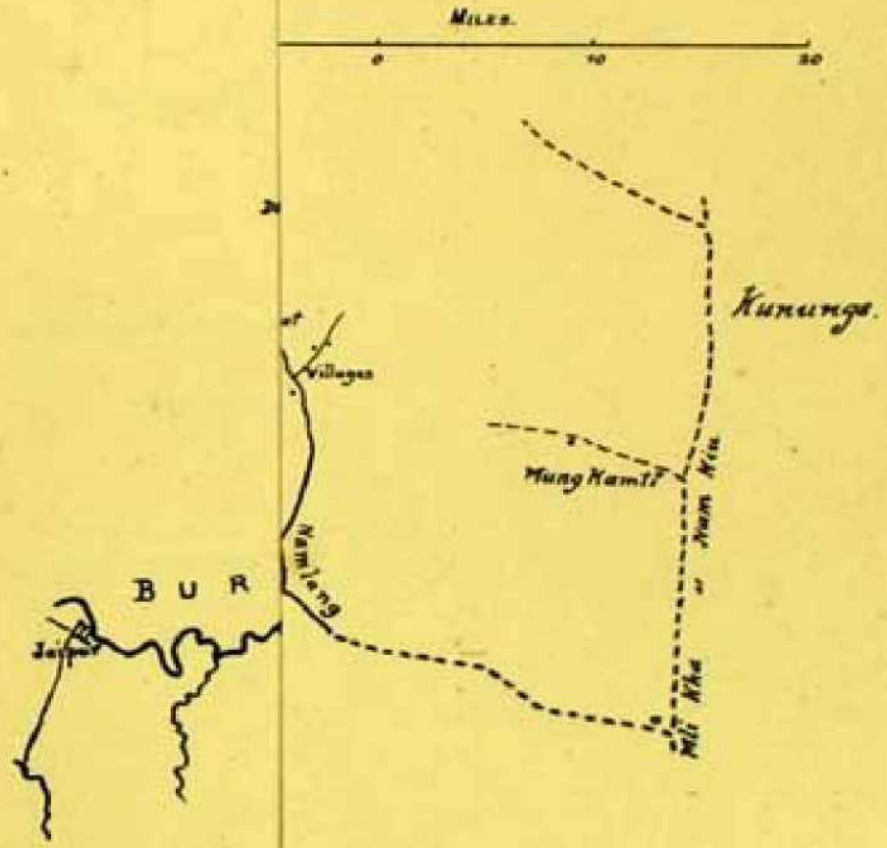
S. E. PEAL. PLA No. IV.



D AT THE SURVEY OF INDIA OFFICES, CALCUTTA.

Stages from Jaipur to Dapha.

1 Jaipur by land.
2 Makum ,,
3 Takial ,,
4 Moko ,,
5 Bisa ,,
6 Jungle ,,
7 ,, ,,
8 Khagam ,,
9 Bisi ,,
10 Dungan, ,,
11 Nchong ,,
12 Dapha ,,

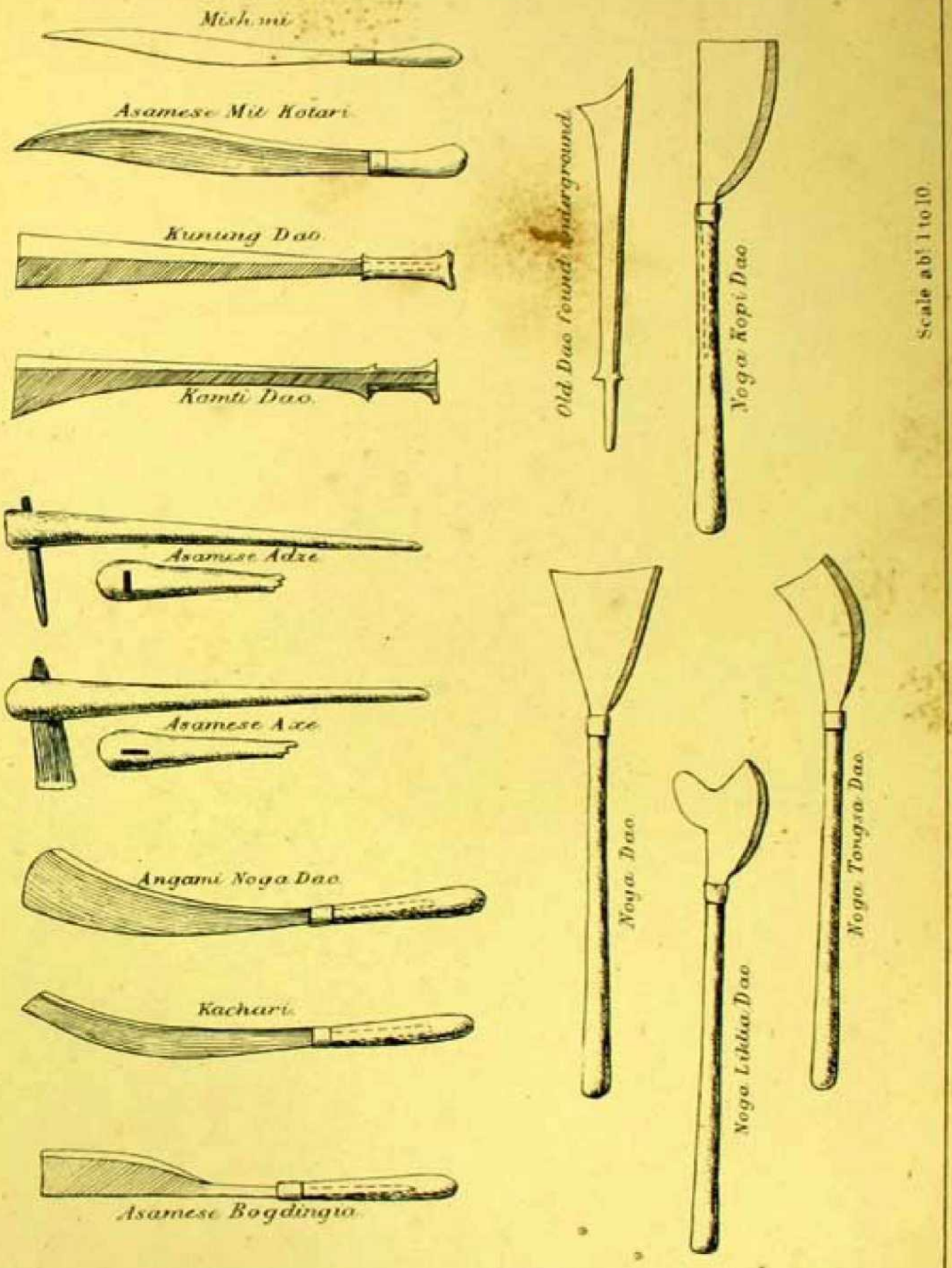


Stages from Mbongyang to Jaipur.

Mbongyang or Dapha to—

1 Nchong kha.
2 Dungan yup.
3 Bisi.
4 ↑ Mganto.
5 Bisa.
6 Manmo.
7 ↓ Janglo.
8 ↓ Jaipur.

OGRAPHED AT THE SURVEY OF INDIA OFFICES, CALCUTTA.



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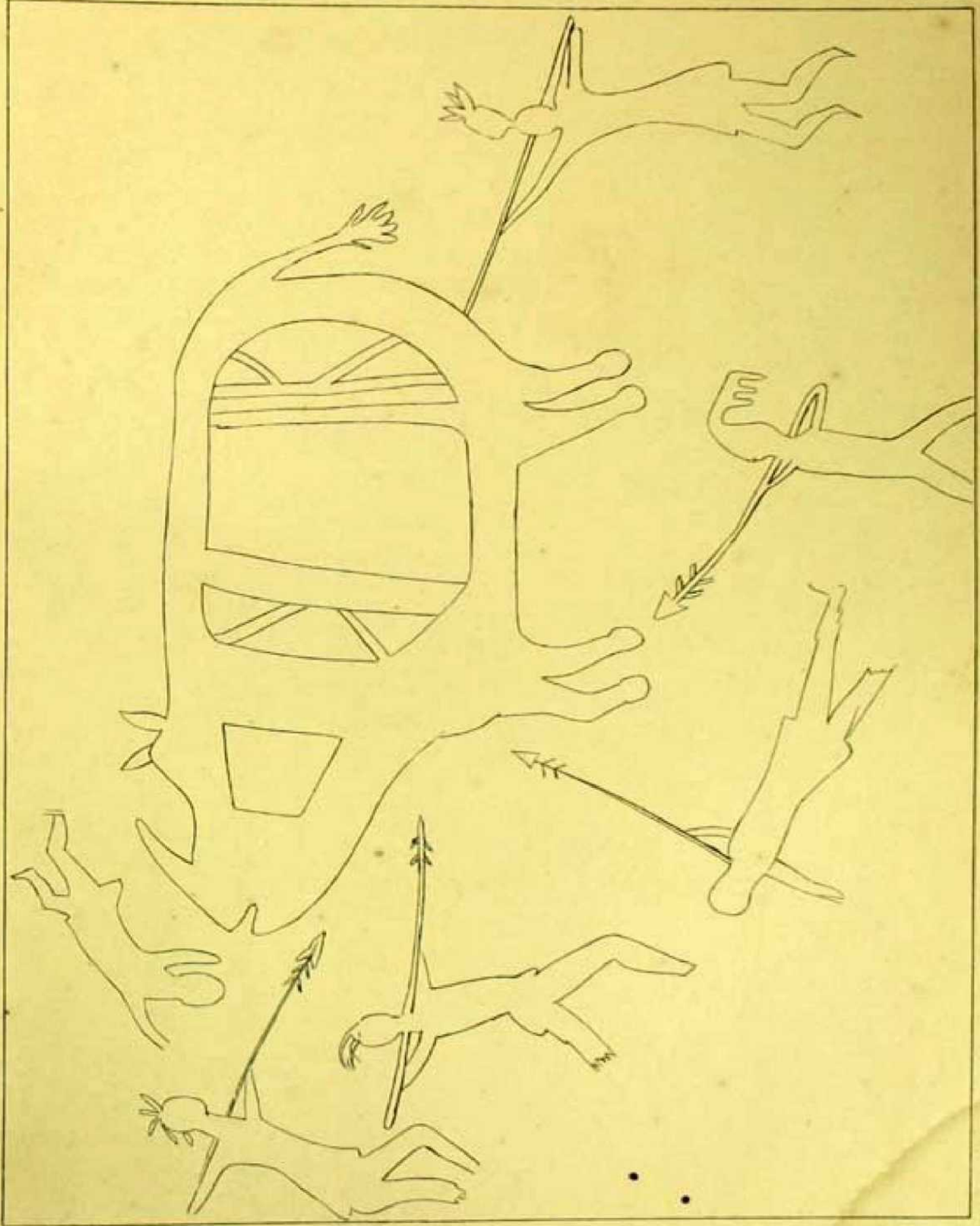

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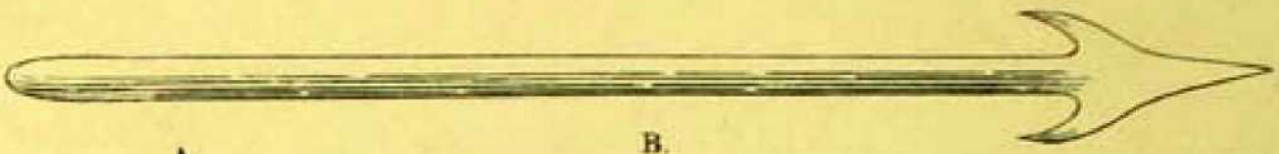

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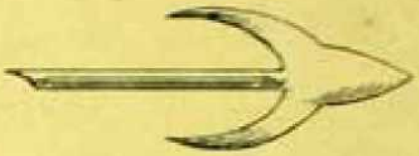

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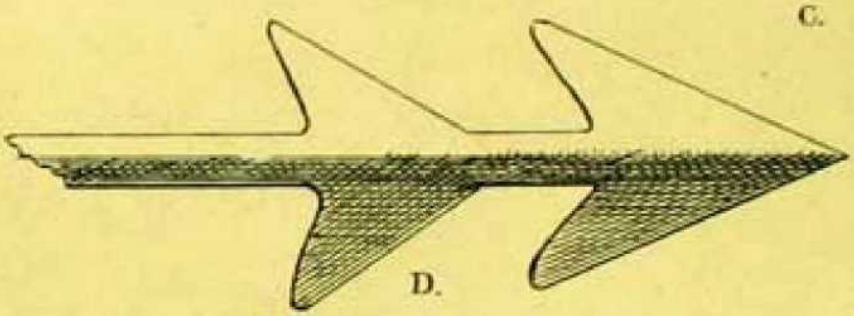
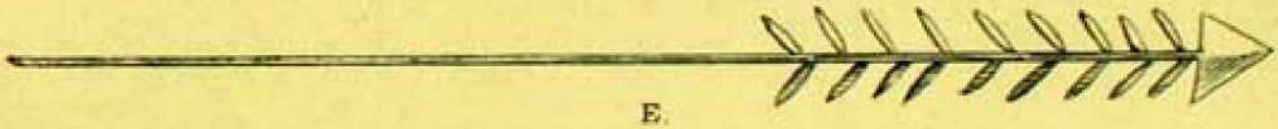
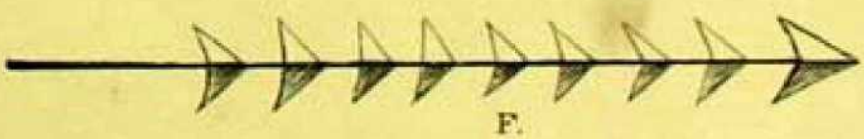


D.



E.



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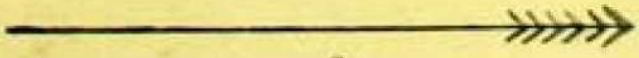

G.

I.

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INDEX.

☞ Names of new Species have an asterisk (*) prefixed.

Abaratha ransonnettii, 88
* ,, taylorii, 88
Abisara neophron, 95
Amblypodia diardi, 79
,, fulgida, 80
Antigonus angulata, 100
Argynnis gemmata, 93
,, lathonia, 93
Artocarpus chaplasha, 18
Astictopterus butleri, 98
,, diocles, 99
Atella sinha, 94
Athyma selenophora, 94
,, zeroca, 94
Aulocera padma, 93
Baoris oceia, 85
Bombax malabarium, 18
Bos, 57
,, arni, 58
,, gaurus, 58, 64
Butea, 57, 64
*Castalius ananda, 75, 76, 96
,, decidia, 75
,, elna, 96
,, hamatus, 74, 75
* ,, interruptus, 74
Castenopsis, 40
Chapra mathias, 99
,, prominens, 99
*Choaspes anadi, 83, 84
,, gomata, 83, 98
,, harisa, 84
,, vasutana, 98
Coladenia, 100
,, dan, 100
,, indrani, 100
Colias edusa, 98
,, myrmidone, 98
Cupha erymanthis, 94
Curetis bulis, 95
,, thetys, 95
Cyaniris, 67, 68
,, akasa, 68, 72
,, albocæruleus, 67, 69, 71, 72, 95
,, cagaya, 68
*Cyaniris chennellii, 72
* ,, dilectus, 67, 68, 69, 95
* ,, jynteana, 67, 69, 95
,, lanka, 68
,, lavendularis, 68
,, limbatus, 68
* ,, marginata, 67, 70
* ,, placida, 67, 68, 95
,, puspa, 67, 68, 69, 70
,, singalensis, 68
,, transpectus, 67, 70, 95
Cyclopides subvittatus, 99
Cyrestis, 1
* ,, tabula, 1
,, thyonneus, 2
Danainæ, 93
Danais, 65, 66
,, juventa, 65
,, limniace, 65, 92
,, radena, 65
,, septentrionis, 92
Delias descombesi, 98
Diasperos, 57
Dodona, 95
,, adonira, 95
,, deodata, 95
,, dipœa, 94, 95
,, durga, 95
,, egeon, 95
,, eugenes, 94, 95
,, fatua, 95
,, longicaudata, 95
,, ouida, 95
Deudorix epijarbas, 97
,, nasaka, 77
Discophora, 93
Elephas, 58
,, indicus, 64
Enispe euthymius, 93
Equus, 57
Erithrina indica, 18, 40
Euplœa alcathoë, 92
,, deione, 93
Euripus cinnamomeus, 94
,, halitherses, 94

Euripus ista, 94
Euthalia aphidas, 94
„ phemius, 94
„ sancara, 94
„ telchinia, 94
Halpe homolea, 99
„ sikkima, 99
Herona marathus, 94
Hesperia, 85
„ acroleuca, 92
„ aria, 85
„ hiraca, 92
• „ naga, 89
„ oceia, 85
• „ swerga, 89, 100
Hesperiidæ, 83, 98
Hestina zella, 65
Horaga, 96, 97
„ ciniata, 96
„ viola, 96
Hyarotis adrastus, 99
Hypolycæna chandrana, 78
„ nasaka, 77, 78, 92, 97
Iolaus maculatus, 93
Iraota mæcenas, 97
Ismene, 84
„ aria, 84
„ druna, 84
„ gomata, 83
„ sasivarna, 84
Isoteinon masuriensis, 92
• „ satwa, 86, 99
Junona almana, 94
„ atlites, 94
„ laomedia, 94
„ orithya, 94
Lemoniidæ, 94
Lepidoptera Rhopalocera, 93
Lagerstræmia regina, 18
„ elastica, 18
Lethe dinarbas, 93
„ dyrta, 93
Lirestona jenkinsia, 11
Loxura tripunctata, 97
Lycæna cagaya, 68
„ leela, 66
„ nora, 73
„ wosnesenskii, 67
Lycænidæ, 66, 77, 79, 80, 95, 96
Macropus major, 61
Mancipium brassicæ, 82
• „ deota, 82
• „ devta, 82
Matapa, 84
„ aria, 84
„ druna, 85, 99
„ sasivarna, 85, 99
• „ shalgrama, 84, 85, 99
„ subfasciata, 84
Melanitis duryodana, 93
Metaporia caphusa, 65
Miletus boisduvali, 96
„ hamada, 76, 95
Morphinæ, 93
Myrina onyx, 96
„ syrinx, 96, 97
Nacaduba ardates, 72, 73, 74
• „ bhutea, 72, 73, 96
• „ dana, 73
„ nora, 73
Nadisepa jarbas, 97
Nemeobiinæ, 94
Nilasera absens, 97
• „ adriana, 79
Nilasera areste, 81, 97
„ ariadna, 80, 97
• „ asoka, 78, 79
„ bazalus, 97
„ fulgida, 80, 97
• „ moelleri, 80
Niphanda, 77
• „ cymbia, 76, 77, 95
„ tesselata, 77, 95
Nymphalidæ, 65, 93
Nymphalinæ, 65, 94
Ornithoptera, 98
Padraona purrœa, 99
•Panchala paramuta, 81, 97
„ perimuta, 97
Papilionidæ, 82, 98
Papilioninæ, 98
Papilio aidoneus, 98
„ asiatica, 93
„ astorion, 98
„ erioleuca, 98
„ ganesa, 98
„ machaon, 93
„ pompeus, 98
„ rhadamanthus, 98
Parnara bada, 99
„ cahira, 99
„ narooa, 99
• „ tulsi, 86, 99
Pierinæ, 82, 98
Pieris, 65, 83
Pithecops zalmora, 95
Plectomia, 24
•Plesioneura agni, 87, 100
„ ambareesa, 87
„ badia, 88
„ chamunda, 87, 100
„ leucocera, 100
„ restricta, 100
„ sumitra, 100
Polyommatus albocæruleus, 71
„ dilectus, 68
„ ellisi, 66, 67
„ transpectus, 70
Poritia hewitsoni, 97
Portax, 57
Prioneris clemanthe, 98
Pterygospidea badia, 88

Puspa, 67
Pyrameis cardui, 94
Pyrgus dravira, 88
Radena, 65
Rapala orseis, 97
,, schistacea, 97
Rhinoceros decannensis, 57
,, indicus, 56, 57, 60, 64
,, namadicus, 56
,, sondaicus, 60, 64
,, sumatrensis, 64
Rhopalocera, 65, 88, 93
Satarupa andamanica, 90
,, bhagava, 90
,, gopala, 100
,, sambara, 100
Satyrinæ, 93
Sithon jangala, 97
Shorea, 57
Suastus gremius, 99
Tagiades atticus, 99
,, menaka, 100
Tectona, 57
Thecla malika, 78
,, nasaka, 77
Vatica lancifolia, 40
Ypthima nareda, 93
,, newara, 93
Zipaëtis, 93
Zipœtes, 93
Zizera pygmæa, 95
Zizyphus, 57
Zophoessa atkinsonia, 93
,, sura, 93

LIST OF PLATES.

I. Indian Butterflies.

II. View from the Mouth of the Dapha Valley, N. to N. E.

III. Highest Peak of the Dapha or Wathong.

IV. Sketch Map of Assam.

V. Sketch Map of the Dihing Basin.

VI. Assamese Weapons.

VII. Rhinoceros Hunt Scene ($\frac{1}{4}$th original size), Ghormangar Cave.

VIII. A. Iron Spear (Chunádari Cave), B. Iron Spear (Lohri Cave), C. Iron Arrow-head (Chunádari Cave), D. Wooden Spear (Ghormangar Cave), E. Supposed Stone Spear (Likunia Cave), F. Wooden Mongile from a bark-drawing by an aboriginal Australian (copied from Brough Smith's 'Aborigines of Victoria'), G. Chip Stone Spear (Brough Smith), H. Angular flake found in Caves, I. Attempted restoration of Cave Stone-Spear.

IX. Indian Butterflies.

X. Indian Butterflies.

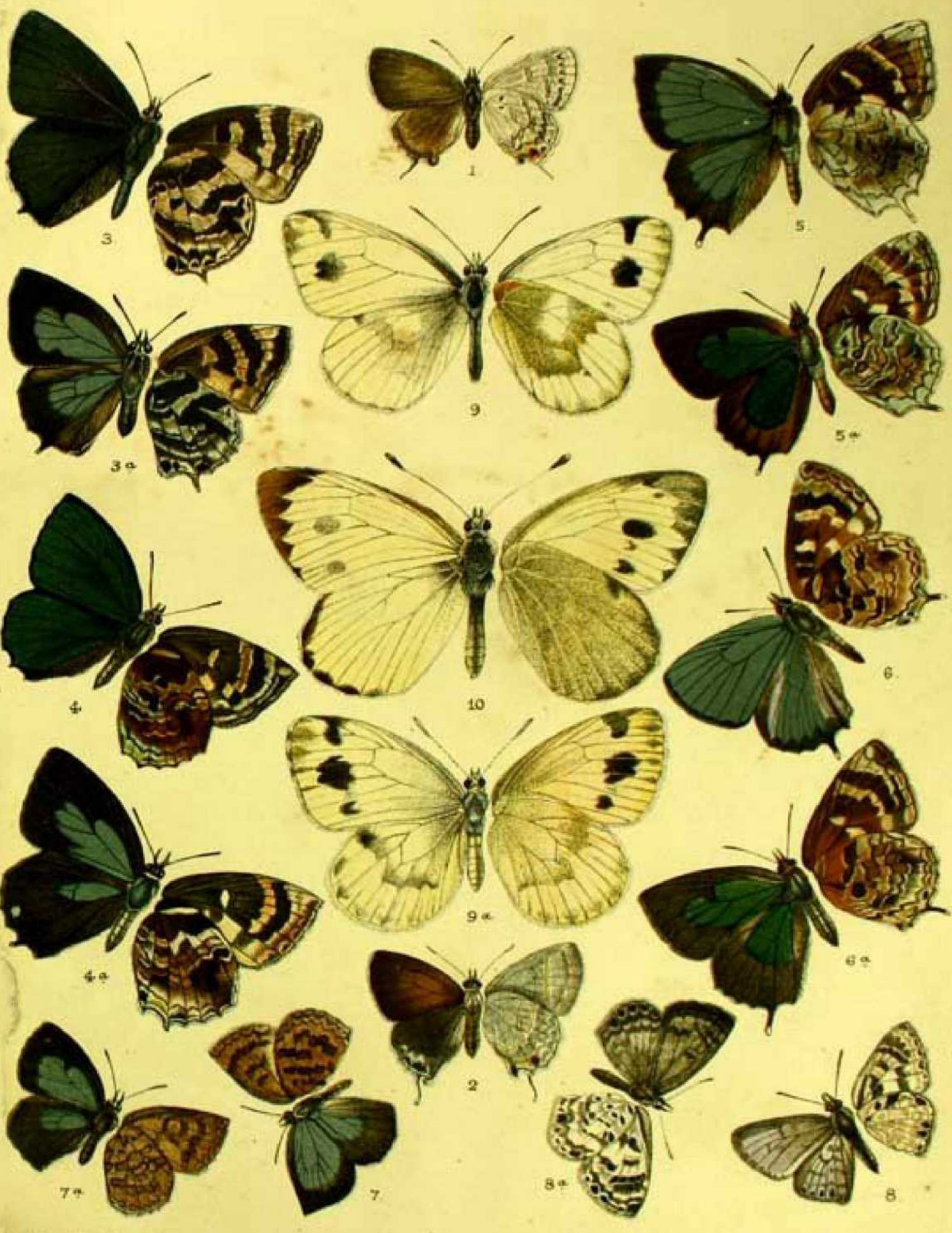
CENTRAL LIBRARY

Hahari Lall Doss &
Girish Chander Chuckerbutty del.

West Newman & Co chromo lith.

INDIAN BUTTERFLIES.

CENTRAL LIBRARY



Behari Lall Dose &
Girish Chunder Chuckerbutty del.

West Newman & Co chromo lith.

INDIAN BUTTERFLIES.

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